CyberMiles: Empowering the Decentralization of Online Marketplaces

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In collaboration with 5miles Holdings Limited

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You must take all necessary professional advice, including in relation to tax and accounting treatment. We hope the CyberMiles project will be highly successful. However, success is not guaranteed and digital assets and platforms involve risk. You must assess the risks and your ability to bear them.

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1. Summary

CyberMiles Foundation Limited ("**CyberMiles Foundation**"), is a company limited by guarantee to be incorporated in Hong Kong and governed in a not-for-profit manner. It will work closely with 5miles LLC ("5miles"), with the aim of developing CyberMiles: *a next-generation blockchain optimized for e-commerce and designed for mainstream adoption*.

By focusing on e-commerce and online marketplaces, CyberMiles will integrate the latest blockchain innovations to power "Smart Business Contracts" on a highly effective chain, and resolve the latency issues associated with existing, general-use blockchains. Its utility token, CyberMiles Token, is planned to be a "master token" to fund & empower new e-commerce applications and projects, similar to how ETH is used for the current generation of ICOs.

Throughout the network development, CyberMiles Foundation will be assisting the governance of the decentralized platform, with strong involvement by members of the ecosystem. Our vision for the future is a public network that provides secure and trusted business services for its members, by its members.

5miles plans to gradually migrate its sellers and buyers, as the first group of users, onto the decentralized network. In other words, 5miles's marketplace platform will be one of the first environments to utilize the network as a back-end service and jumpstart the ecosystem. Once the network reaches a critical mass, its own network effects, strengthened by incentives provided by the CyberMiles Token ("CMT"), are expected to be applied to other partner platforms and marketplaces, driving CyberMiles' development as a market-leading blockchain protocol for commercial and marketplace applications.

5miles

5miles is a leader in consumer-to-consumer ("c2c") e-commerce in the United States. Its flagship application, the 5miles app, has over 10 million registered American users, and is estimated to surpass $3 billion in total transaction value in 2017[1]. The 5miles app is rated a top 10 shopping application in the United States[2]. On average, 5miles users spend 24 minutes per day on the app, making it easily one of the most engaging e-commerce apps in the US [3].

5miles has been active in the research and development of blockchain technologies.   We believe that blockchain technologies could provide natural solutions to common problems in a c2c e-commerce network. For example, the blockchain network's mechanism for reaching consensus amongst non-cooperative strangers (that is, reaching the Nash equilibrium of the network) is a key feature that could allow c2c sellers and buyers to reach agreements, and

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[1] Company's internal BI data; Transaction value based on estimated gross merchandise value.
[2] https://www.similarweb.com/apps/top/google/app-index/us/shopping/top-free
[3] Google Analytics July 2017 data for largest market, Dallas. Two-year average for total network is over 22 mins

hence greatly reduce the cost associated with customer support and dispute resolutions. The blockchain network's digital token could provide a very efficient in-network settlement currency, and greatly reduce transaction costs. It could also act as a springboard for members of the community to create their own initiative, creating a strong network effect. The blockchain network's decentralized computing infrastructure could ensure that the marketplace will never go offline, and significantly reduce certain operator's IT expenses. Furthermore, blockchain technology could facilitate and even automate business transactions through the use of smart contracts and an immutable ledger.

2. Vision and Motivation

Modern society's commercial infrastructure has evolved to favor the largest players, from big box retailers like Walmart, to e-commerce giants like Amazon. These players have accumulated the scale advantages that allowed them to achieve greater efficiency through centralized procurement, marketing, and distribution. But while efficient, these giants of commerce and retail are completely centralized operations focused on selling new, standardized products. The constant influx of new products, combined by the vast amounts spent on marketing and advertising to convince consumers to buy these products, has resulted in a wasteful society where unused or lightly used products are either taking up space in our homes or exist as waste in landfill.

Certain platforms that allow c2c trading have harnessed the internet to better connect buyers and sellers. They encourage the resale of products across different categories and geographic markets. However, these platforms are also centrally managed, running all the functions such as listings review, dispute resolution, payments, and allocation of user traffic. As a result of centralizing all these functions and limiting payment solutions to a handful of providers, the total costs of conducting business can be as high as 15% of the merchandise value [4]. Furthermore, in pursuit of greater scalability on its centralized functions, many of the products sold such platforms often come from larger, more established merchants, selling products with larger inventory.

From its formation in 2014, 5miles has set out to establish a very different kind of marketplace, one that was built to enable truly c2c transactions and unlock value from pre-existing merchandise. Its platform is completely mobile-based, enabling real-time, location-specific communication to finalize deals amongst friends and strangers alike in a safe environment. Due to its market-by-market focus, 5miles has also been an important tool for many local businesses, who otherwise would have been closed out from online marketing, which usually favors businesses with deeper pockets and advanced technical capabilities to run online campaigns. All users, from casual shoppers to business accounts, have unique user profiles, peer ratings and reviews, ensuring that good marketplace participants would naturally garner

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[4] https://www.fees.ebay.com/feeweb/feecalculator; total fees include Paypal fees of ~3.0%

more interest and business on 5miles.   In essence, 5miles has been building an online ecosystem that leverages geographic proximity between users to create vibrant marketplaces.

From its vantage point of a c2c marketplace operator, 5miles is a strong believer that blockchain-based technology and decentralized processes can further revolutionize online marketplaces and local commerce. 5miles has seen that economic incentives, when transparent and properly implemented, motivate people to be active and good participants in a community. If those incentives can be earned throughout the various processes that run a marketplace and online community, then many marketplace functions that are currently centralized can be done in a decentralized manner, powered by the communities' own members. This strengthens the participation and creativity of its marketplace participants, while at the same time allowing the network to become even more dynamic and scalable.

While promising, existing blockchains have not been able to address the needs of e-commerce because 1) they are not designed to do so; 2) they have not solved the latency issues in order to support the high volume of transactions typical of e-commerce platforms; and 3) the current implementations of Smart Contracts are too primitive for e-commerce use.

That's why CyberMiles Foundation is developing a next-generation blockchain protocol with the following attributes:
- To support a large library of commerce-related Smart Business Contracts that power decentralization of processes
- To manage user identity & transaction data privately & safely, while enabling new transactions & settlements amongst network participants. Starting with 5miles' 10+ million userbase, this access to user data will be a key driver for other e-commerce & consumer finance platforms to be built on CyberMiles
- To utilize a delegated-PoS ("Proof-of-Stake") consensus engine to support tens of thousands of transactions per second ("TPS"), hence resolving latency issues of existing chains.

In building this future, CyberMiles has the potential to be the first blockchain with both real-world business application and mainstream adoption, and may also soon be one of the largest blockchain networks in existence.

cybermiles

3. CyberMiles & 5miles Background

CyberMiles is the blockchain technology being developed by CyberMiles Foundation, a blockchain research laboratory working closely with 5miles. 5miles was formed in 2014 by a world-class team from China and the US. Since its inception, 5miles has since raised approximately USD 62 million from top-tier investment firms such as SIG, IDG, Morningside, and Blue Lake. Since the launch of its app in 2015, 5miles has already established itself as a Top 10 shopping app, with more than 12 million users and USD 3 billion in annual transaction value. Its founding CEO, Dr. Lucas Lu, was previously a co-founder and CTO of Light In the Box, a company which went public on the NYSE. Before that, Lucas was the first GM of Alibaba's Taobao Mobile platform.

SimilarWeb's August 2017 rankings for top shopping apps by usage[5]:

App		Publisher	Usage Rank
1	Amazon	Amazon Mobile LLC	1
2	Amazon Shopping	Amazon Mobile LLC	2
3	eBay - Buy, Sell & Save Money. Best Mobile Deals!	eBay Mobile	3
4	OfferUp - Buy. Sell. Offer Up	OfferUp Inc.	4
5	letgo: Buy & Sell Used Stuff	letgo	5
6	Wish - Don't Overpay	Wish Inc.	6
7	Groupon - Shop Deals & Coupons	Groupon, Inc.	7
8	Walmart	Walmart	8
9	Slidejoy - Lock Screen Cash	Slidejoy	9
10	5miles: Buy and Sell Used Stuff Locally	5miles LLC	10
11	Amazon Offers	Amazon Mobile LLC	11
12	AliExpress Shopping App - Coupon For New User	Alibaba Mobile	12

5miles proposes to be the initial ecosystem to apply real-world applications of the blockchain solutions that the Foundation is developing. CyberMiles is the blockchain protocol that will

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[5] https://www.similarweb.com/apps/top/google/app-index/us/shopping/top-free

underpin these solutions, and CMT aims to be the fuel for transactions, and serve to incentivize participants in the ecosystem.

The CyberMiles Blockchain Protocol and CyberMiles Token

CyberMiles is a new blockchain protocol being developed and specifically designed and optimized for business and marketplace applications. The protocol will consist of a blockchain based "virtual machine" and defined modules of middleware software stacks, which operate outside the chain to support decentralized processes governed by smart contracts implemented on the network.

CMT is the native crypto token currency being created to be integrated with and used on the CyberMiles network, and on decentralized applications on the network.

Initially, CMT is proposed to be issued and implemented on the public Ethereum blockchain as an ERC-20 compliant token. 5miles will integrate its existing "wallet" function to hold CMT balances, and allow users to utilize the tokens on the 5miles platform shortly after the tokens are activated. The CyberMiles protocol is being developed for implementation on its own open source blockchain. In this scenario, the initial CMT based on ERC-20 would be exchanged on a 1:1 basis with native CMT issued on CyberMiles' blockchain, with any stored value & rights transferred to the native token.

Our aim is for CMT to serve the following purposes:

1. To reward and incentivize community members to contribute computing power and maintain the integrity of the network. Examples of such services could include running network nodes, validating transactions, and executing smart business contracts. When e-commerce market participants, such as sellers, buyers, and marketplace makers, utilize the network services, they would provide CMTs to network maintainers.

2. To incentivize community members to provide value-add services, such as peer-to-peer customer support and conflict resolution services. The service provider could receive CMT from other members in the community after a consensus is reached.

3. To facilitate transactions within the network. Processes and interactions throughout the supply chain, as well as between buyers and sellers, could be recorded and facilitated by CMT. That allows for decentralized settlement and could potentially greatly reduce the cost of transactions and friction on the network. The network would extract a transaction fee to pay validators who execute smart business contracts associated with the transaction.

In order to create the CyberMiles e-commerce ecosystem, substantive research and development into blockchain technology itself is needed. Already, 5miles has developed a

novel blockchain protocol to support complex business transactions, known as "smart business contracts", in blockchain networks, with CMT to be the native token for this new blockchain protocol. This new blockchain protocol is further detailed in the CyberMiles Technical Whitepaper available at (https://cm.5miles.com/file/Technical%20White%20Paper.pdf). Interested technical readers are encouraged to read further, and join the open source development community for CyberMiles.

4. Potential CyberMiles Applications - 5miles Case Study

5miles' app is expected to be one of the first commercial applications to utilize the CyberMiles blockchain network. In this section, we discuss specific application scenarios and features that would be enabled by our proposed decentralized CyberMiles blockchain solution, and contrast them with a typical centralized c2c e-commerce marketplace. The CyberMiles blockchain protocol has a built-in mechanism through its tokens to help non-cooperative network participants reach the Nash Equilibrium consensus.

A marketplace that never goes down

One of the key advantages of a decentralized network is the high availability of network services. It is resistant to data center failures. As long as some network nodes are running, the network services will be available – although the service capacity or bandwidth may fluctuate.

Today's c2c marketplace apps depend on centralized servers and IT departments for back-end services. If the data center goes down, the marketplace will cease to function. In the CyberMiles blockchain network, computing power and business services can all be provided by members of the community. And hence, the network service is more resilient to failures.

Community-based conflict resolution

The economic incentives introduced by CMT could provide a means for community-based conflict resolution. This would save a marketplace operator, such as 5miles, the need for employing and maintaining a team of customer service agents for resolving potential conflicts between buyers and sellers. Subject to appropriate governance controls, volunteers in the community could now be arbiters, and could use transactional data recorded transparently in the blockchain to make judgements. This would work as follows:

- When a buyer and a seller enter into an agreement, they could each put up an equal amount of CMT as a deposit for the transaction. If there is no dispute after the transaction completes, each of them will automatically get back their tokens through a smart business contract, or the CMT could act as a settlement currency.
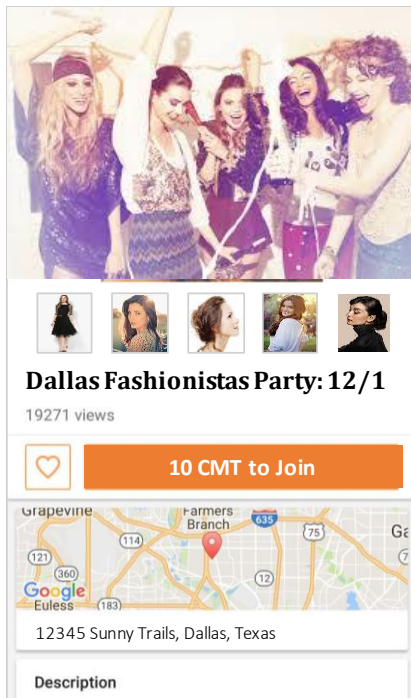
- If a dispute does occur, however, the network would automatically ask a pool of service providers to bid to become an "arbiter".

- The arbiter, once accepted by both parties, would work with both the buyer and seller off the blockchain to resolve the conflict. Subject to compliance with data protection rules, they would have full access to the transaction details.

- Once the arbiter makes a decision, the losing party would forfeit their deposited CMT to the arbiter. The arbiter's decision would be final, as this would have been pre-agreed by both parties.

In this case, the service would be provided entirely by the members of the network community, and the service providers are compensated with CMT. So, the value created by the network could be represented in digital form, in CMT. The marketplace operators could focus on their core competencies and eliminate the cost, energy and time associated with dispute resolution.

User-generated & user-curated "5miles Groups"

5miles has plans to introduce user-generated forums and sub-communities ("Groups") within the platform. These 5miles Groups would focus on common interests (like "Fashionistas of Dallas", or "Vintage Cars Forum") or by affiliation (church groups, school districts, universities, etc.), and can be used to plan events and exchange ideas. However, for traditional platforms, managing user forums is a difficult task, as centrally-managed forums lack local authenticity and flexibility.

Dallas Fashionistas Party: 12/1
19271 views

♡   **10 CMT to Join**

12345 Sunny Trails, Dallas, Texas

Description

CyberMiles could contain smart-contract modules to enable and incentivize the marketplace participants to form and manage these sub-communities. Network members can use a certain amount of CMT to propose and establish a new Group. To join a particular Group, participants pay "membership dues" in CMT, with part of the proceeds utilized by a Group moderator. Businesses or participants who want to promote their products or businesses to members of these Groups would have to pay an access fee (determined and governed by smart business contracts), and members could also use CMT to facilitate events (like school fundraisers, etc.). Groups with the highest amount of participation will rank highest and receive more prominence within the 5miles community.

Local Promotions and Brand Ambassadors

As a local marketplace, focused on achieving very high user density in each of its markets, 5miles has naturally attracted a large number of local businesses, including service providers, retailers and resellers, restaurants, and free-lance professionals. For many of these business users, 5miles is their "online storefront", and their preferred channel for local marketing.

Illustrative example of CMT based promotions:
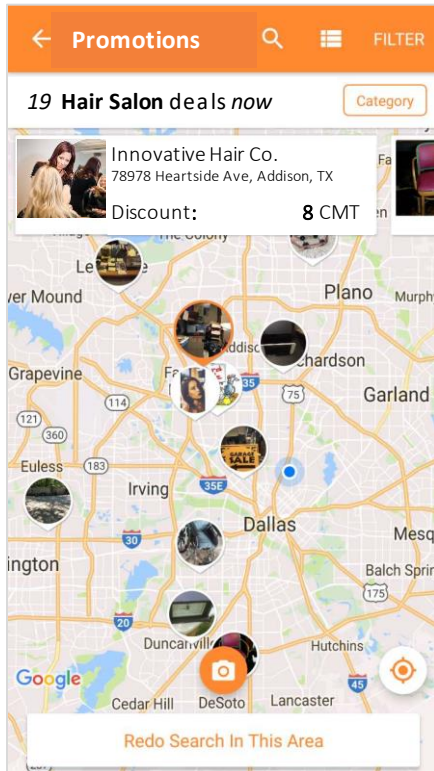
The CyberMiles community and 5miles could together develop smart-contract based solutions to enable highly-targeted, real-time promotions for businesses. To illustrate a potential scenario:

1) Business (or service provider) uses CMT to transmit special promotions (digital coupons) to relevant users within a certain radius

2) Users with the digital coupons who make a purchase from the business under the terms stipulated in the smart-contract receive the designated number of CMT as a form of coupon/discount.

3) No changes to standard prices, point-of-sales systems, or marketing materials required for the business to conduct these highly targeted promotions.

Furthermore, the CyberMiles could facilitate smart-contracts for key influencers within the 5miles the ecosystem, so as to promote positive experiences they have had with local businesses. Many 5miles users have hundreds of "followers" on 5miles, and they also have significant social media presence.

5miles could introduce a user reviews page called "5miles Experiences" that allows users to post pictures of products they've purchased or interactions they've had with businesses in 5miles. CMT could be transferred from the business to the "brand ambassador" based on the number of views or likes that are generated by the post.

*Illustrative examples of influencers sharing 5miles Experiences:*
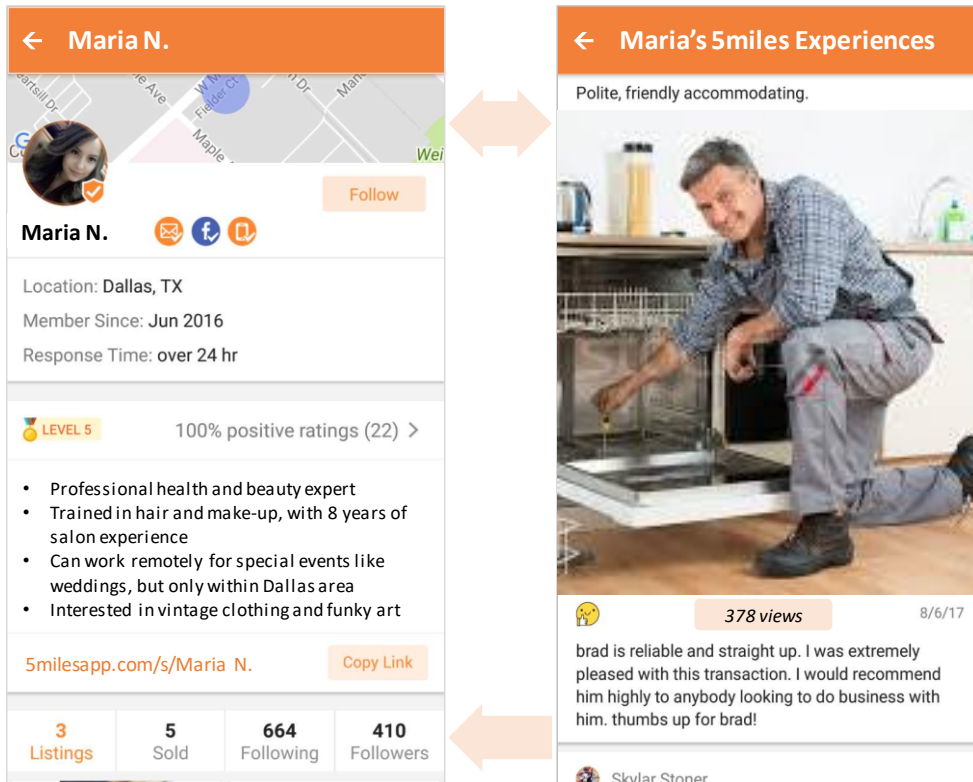
Marketplace "leads" bidding

As a social network centered around local commerce, 5miles is uniquely well-suited to match supply and demand for goods and services, and CyberMiles' solutions could fuel the next-generation of features to better connect "sellers" with the most relevant "buyers". For example, we expect many car dealers or auto mechanics would like to reach out to the daily volume of approximately 12,000 active car buyers on 5miles, and many moving companies would like to reach out to users buying large furniture.

On traditional marketplaces, sending messages or pop-up notifications to those users may be intrusive and disruptive. However, a potential solution could be:
- merchants & service providers use CMT to bid to transmit messages
- relevant users receiving messages can choose to accept and view the messages, and receive a certain allocation of CMT for doing so.

Illustrative example of CMT facilitating marketplace leads:
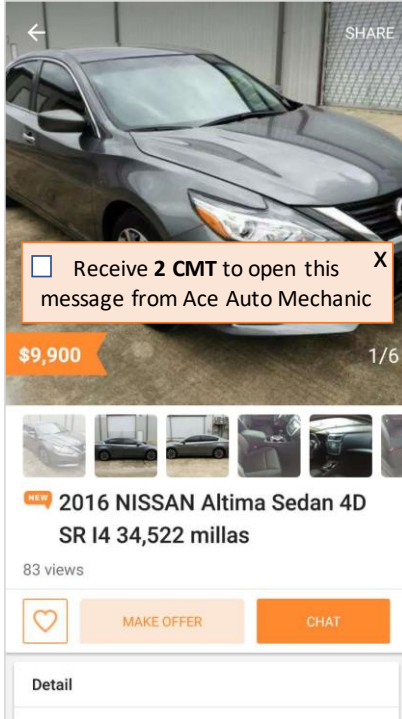
As a result of the economic incentives represented by CMT, users could be more accepting of in-bound inquiries, and more potential matches between merchants and buyers could be possible.

Shared advertising resources

In most existing c2c marketplaces, the central operating entity sets rules on how the for-sale items are displayed to the buyers, and then extract profit by selling advertising space through auctions. In a decentralized and community-operated c2c marketplace, the advertising revenue could be captured by the network itself and shared among the community members. To illustrate a potential scenario a potential scenario:

- Through a set of smart business contracts, the blockchain network sets up an auction market for search keywords. Sellers can bid for advertising space for their products, and the payment in CMT is governed by the smart business contract.

- The smart business contracts that create product lists for decentralized applications ("Dapps") prioritize and label advertised items, and the Dapps display them to the buyers when the buyers are browsing or searching.

- Once the advertisements are displayed, the seller's CMT payment in the related smart business contract could either evaporate (as a way to reduce total supply of CMT if the network has an inflationary policy), or be distributed back to buyers as a form of price reduction / promotion.

In addition, the token holders could also vote on proposed advertisements to reduce spam and other problems associated with traditional internet advertising.

Democratic community management

In a c2c marketplace, the most contentious problems are related to centralized management. For example:

- **Account closure.** In a centralized marketplace, the marketplace operator can unilaterally close accounts. That could negatively impact the affected sellers and buyers, as it takes significant of time and monetary investment to build up highly-rated accounts.

- **Censorship.** The marketplace operator sometimes needs to intervene and remove illegal products offered for sale (e.g., firearms, or prescription drugs in certain countries or regions). In a centralized marketplace, the operator makes unilateral decisions. Such decisions are expensive (as they often require legal expertise and review), create large potential liabilities, and can even cause resentments in the community if users believe they have been improperly made.

We strongly support safe and appropriate marketplaces. However, centralization by its nature concentrates decision-making into a single person or body.

CMT and the CyberMiles blockchain platform, through smart business contracts, could provide ways for the community to manage and regulate itself. As we described above, the community can resolve individual conflicts by incentivizing arbiters. However, for issues that go beyond two transactional parties, we could introduce a voting mechanism that is similar to the "Proof-of-Stake" ("PoS") consensus process. This would require the community to come together and reach consensus on issues related to the management of the whole network. Such consensus could be reached through the use of smart business contracts. To illustrate a potential scenario:

- A person in the community brings up a request to close an account or censor a product listing for any reason. This person pledges a specified number of CMT in a smart business contract when making this request.

- The network automatically requests a number of (for example, 100) random token holders to vote on this issue. Each vote costs a certain amount of CMT depending on the system setup. The voting results are binary, and a simple majority determines the outcome.

- Depending on the voting result, the initial requester wins or loses the case. And everyone who casts a vote either prevails or forfeits (that is, according to whether they voted with or against the majority decision).

- The pledged CMT from the initial requester and the payment from each voter is put into a collection of CMT held by a smart business contract.

- Depending on the outcome, the initial requester could forfeit their pledged CMT (if the request is voted down), or get back the pledged amount plus an allocation from the CMT used to cast a vote (if voted in his/her favor). The majority voters get back their contribution, plus an allocation from the other CMT used to cast votes. The other voters receive nothing.

A system like this creates incentives for community members to participate in the management of the network itself. It could be far more effective and cheaper than a centralized system.

5. CyberMiles Beyond 5miles

In the previous section, we discussed CyberMiles blockchain network's potential applications in a c2c marketplace. That is the sweet spot of 5miles, and is how 5miles can help the CyberMiles Foundation jumpstart the network.

However, we aim to make the CyberMiles solutions capable of supporting many kinds of business transactions beyond the c2c marketplace. As such, the network could provide back office business transaction services to many types of businesses, especially small businesses. Through the concept of smart business contracts described in the technical white paper, the CyberMiles blockchain network could become a leader in the provision of automated / smart contracts for commercial applications.

The CyberMiles network could act as an outsourced provider of a variety of business services including IT, finance, customer service, and community management. Building on the 5miles team's extensive expertise in business execution, the CyberMiles team has identified the following major categories of business contracts we could potentially automate.

A decentralized identify management platform

As the Equifax hack demonstrated (personal identify and credit history of over 100 million Americans were stolen in 2017), centralized personal identity management creates high risk for consumers and high liability for companies that hold such data. To solve this problem, one must rethink the whole paradigm of identity management. One obvious solution is to let the user have full control of her personal information. The user should be able to decide, on a case by case basis, who have access to her data. The access timing, duration, and accepted use of the data should all be approved by the user. In this case, there will be no central repository of personal information to attack. However, without blockchain-based Smart Business Contracts, such systems are also very hard to implement.

Blockchain networks manage identities through cryptographic keys. The user's "wallets" on bitcoin or Ethereum blockchains are decentralized, and entirely controlled by the user through her private key. Using Smart Business Contracts, we can extend the concept of "wallets" to include a secure deposit of not only crypto tokens, but also arbitrary personal information. Like crypto currency wallets, there could be many "personal identity wallets" on the network. Upon user's request (a transaction signed by the user's private key), the wallet can authorize 3rd party applications to access the data temporarily via the OAUTH protocol. A user can use different wallets for different purposes, just like how crypto token wallets are used today. The workflow and figure below illustrate how an "online wallet" for personal information could work. This particular "wallet" stores the user's personal banking information. Hence the user can authorize financial applications on the CyberMiles network to utilize it. An example is the peer-to-peer small business lending application illustrated in the next section.

1. The user selects a "wallet" app she trusts.
2. The user registers personal information and banking information with wallet.
3. The wallet does AML / KYC validations for government mandated anti-money laundry check.
4. The wallet generates a public / private key pair and then broadcasts the public key to the blockchain for record.
5. The wallet authorizes and tests the banking link.
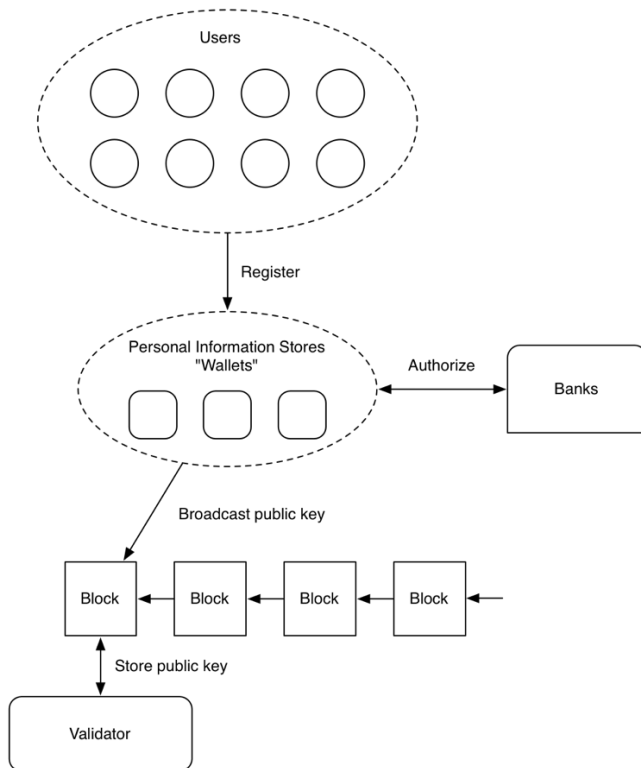
A peer-to-peer small business loan marketplace

A potential application built on the CyberMiles' blockchain would be a peer-to-peer small business loan marketplace. As described in the previous section, we will build a decentralized identity management platform on CyberMiles. The blockchain can then record the credit history for each user identified by her public key.

With the identity and credit history, we can build a loan matching engine (the loan "exchange") on the blockchain. And once loan terms are matched, the Smart Business Contracts would automatically settle the loan directly from each party's bank account using CMT (authorized via their "personal information wallets") without a central clearing house. The workflow and figure below describes how to match and settle a loan.

1. The user logs into the exchange via OAUTH from her wallet. The exchange caches but not stores personal information.
2. The user submits her desired loan terms (borrow or lend, term, interest rate).
3. The exchange suggests matches.
4. The exchange provides detailed credit scores and histories for matched candidates.
5. If the user selects a candidate. Both parties would need to agree.
6. The loan contract is recorded by the exchange and on the blockchain.
7. The exchange requests the wallets to settle both parties via their bank accounts.
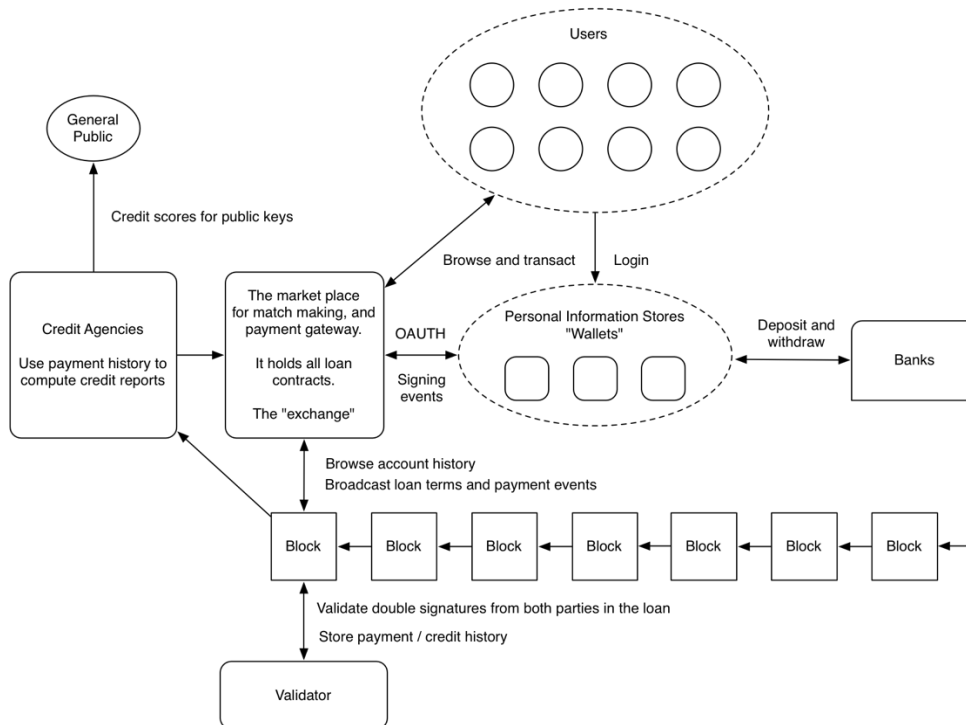
Upon the end of the loan term, when a payment is due, the Smart Business Contract would automatically execute the following:

1. The exchange requests both party's wallets to settle payments via their bank accounts.
2. The transaction result is broadcasted to the blockchain, and become part of the credit history.

A more efficient supply chain

In an e-commerce ecosystem, the seller needs to procure products from suppliers and then ship to buyers. In the process, the product changes hands multiple times. In a traditional system, the transactions along the supply chain must be settled using fiat currencies, which create significant friction and cost.

However, in a token-based system, transactions amongst community members may be recorded instantly and securely using digital tokens. The parties would only convert any excess tokens into other assets from time to time on an "as needs basis", limiting transaction costs.

Addressing the counterfeit problem

Counterfeit products and fraud generally are serious problems in e-commerce marketplaces. For a centralized operator to address this problem, it must generally review and track every product listed for sale on the marketplace. That is prohibitively expensive, and probably ineffective as human reviewers lack the expertise to evaluate the authenticity of all possible products in a marketplace, even with the assistance of technology that is currently available. As a result, most centralized marketplaces can only reactively deal with counterfeit products, creating a "cat and mouse" problem that is common to all centralized systems. A blockchain-based network can help resolve this problem much more elegantly.

- **Proactively:** One of the key features of the blockchain is the immutability of its records. That makes it ideal for tracking the authenticity of for-sale products. Sellers or even manufacturers / suppliers, can create certificates of authenticity for products. Once the certificate is associated with recordable features of a product, and relevant information is stored in a distributed ledger, its ownership can be tracked and the risk of tampering is significantly reduced. That allows buyers (or even arbiters) to review the entire history of the product in the system, depending on the information recorded and visible.

- **Reactively:** As we discussed earlier in this white paper, the CyberMiles blockchain network provides a mechanism for community-based conflict resolution. That of course includes the cases where the buyer disagrees on the authenticity of the product. In disputes alleging fraud, the buyer would need to provide evidence in support of its claim in order to obtain a favorable decision from the arbiter.

The CyberMiles community can be incentivized to come together and prevent counterfeit products and frauds on the marketplace.

Automatic escrow

Most current business transactions require trust. The blockchain network's main feature is its ability to operate in a trustless environment. For example, one of the primary function of an Ethereum based smart contract is an escrow to hold and release assets automatically when certain conditions are met. In many application scenarios outlined in this white paper, the network would need to hold certain escrow or pledged CMT from multiple parties until a certain outcome occurs. This level of automation can make escrow much more prevalent and widely used in our society.

For example, in a sales transaction, the smart business contract could release the CMT in escrow to the seller when the seller's shipping carrier sends back a delivery confirmation to the network. Or the escrow condition may be that when the buyer inspects the product and agrees to accept it. If the buyer does not accept it, the automated arbitration process begins.

An ICO platform for e-commerce

With a Smart Business Contract platform specifically optimized for e-commerce, and common data services such as personal identify and credit history on the blockchain, the CyberMiles blockchain is ideally suited for many types of e-commerce applications. If a blockchain application is going to be built on CyberMiles blockchain, it will utilize the CMT as its means to pay for the execution of Smart Business Contracts and settlement of financial transactions. The application could also issue its own tokens in an Initial Coin Offering to support its own unique features and community. Just as Ethereum-based applications use the ETH as the basis to issue ERC20 tokens in ICOs, e-commerce applications could use the CMT as the basis (i.e., master token) to issue their own ICO tokens.

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6. The CyberMiles Foundation

The CyberMiles ecosystem is envisioned to be a community of partners, including blockchain node operators, validators, service providers, marketplace operators, businesses, and end users. They could provide or utilize the network services, and exchange CMT on the CyberMiles platform. The CyberMiles Foundation is intended as an independent, not-for-profit company that maintains and facilitates democratic governance for the members of this ecosystem. The CyberMiles Foundation's mission is:

To decentralize c2c marketplace platforms, and develop blockchain solutions for real-world and online marketplace applications.

The CyberMiles Foundation has three structural principles:

- Impartiality
  - Managed solely to develop CyberMiles blockchain and applications
  - Separate legal entity from 5miles and any other member company
  - Directors act independently of 5miles, and well-respected within the tech community

- Not-for-profit governance
  - Serves the interests of CMT holders, to develop a robust and scalable system
  - Collaboration with 5miles based on arms-length commercial agreements
  - Token issuance and distribution managed by the CyberMiles Foundation

- Strong governance
  - CyberMiles Foundation is a separate legal entity, with distinct operations and its own governance framework
  - Advised by top-tier professionals
  - Implement best practices from other established foundations
  - Additional measures in response to regulatory changes and requirements

The principal functions of the CyberMiles Foundation will include:
- Open governance of its resources together with other ecosystem partners;
- Support and advance the technology related to CyberMiles blockchain network's implementation; and
- All matters related to ecosystem membership.

The CyberMiles Foundation's mandate is to grow an open ecosystem of digital services that consumers can easily explore and find value in, while giving developers an open and sustainable platform to develop, deliver, and enhance those services and attract users. To fulfill its mission, the CyberMiles Foundation will dedicate resources to three specific goals related to research, development, and governance as described below.

A. Governance goals

The Foundation proposes to dedicate resources to establish a fair and transparent governance process that will take into account the voices and needs of all participants within the ecosystem. This open governance model would oversee decisions related to the membership process, participation rules, token issuance, pricing rules, legal matters, and content and compliance guidelines. The CyberMiles Foundation would be responsible for administering and overseeing the security of the CMT reserve, as well as transparency in its use of CMT and any token proceeds.

B. Research goals

The CyberMiles Foundation aims to foster an environment of innovation by working with partners to test new ways to participate in the ecosystem and drive value creation and network effects. The CyberMiles Foundation could fund research and development efforts to support an autonomous network that is secure and effective in providing business transaction services.

C. Development goals

The CyberMiles Foundation proposes to direct and fund the development of the CyberMiles blockchain itself, as well as tools that give ecosystem partners the ability to build, grow, and create value for one another. As part of this process, 5miles proposes to make its own codebase available as an open source project that can be leveraged to power new communities and add capabilities to existing ones. The CyberMiles Foundation would further this work by engaging development teams to continue improving the technology suite supporting the CyberMiles Ecosystem, and will maintain an open source codebase that ecosystem participants can use.

7. CyberMiles Token Issuance

CMT Token Issuance

The CyberMiles Foundation proposes to initially generate and issue 1 billion CMT, however over time, this may expand and be capped at 10 billion CMT. Further information about when and to whom CMT are proposed to be allocated can be found below.

Upon the completion of the proposed CyberMiles token contribution ("**Token Contribution**") for 700 million CMT, there will be a total of 1 billion CMT in circulation.

Token Contribution is proposed to launch soon after incorporation of the CyberMiles Foundation. For further information and updates regarding the Token Contribution, prospective participants are invited to provide their email address at http://cm.5miles.com. Further updates and announcements regarding the timing and the details of the Token Contribution will be communicated through the website.

Use of Token Contribution proceeds

The proceeds raised from the initial Token Contribution are intended be used for the following purposes:
1) Fund the development and establishment of the CyberMiles blockchain protocol;
2) Marketing and operating expenses related to the expansion and migration of 5miles's platform to the CyberMiles' blockchain network. Arrangements with 5miles and the CyberMiles Foundation will be at arms length; and
3) Research and development costs incurred by the CyberMiles Foundation in developing the CyberMiles platform.

Allocation of CMT

	Pre-Allocation	Vesting Period	Release Mechanism
Initial CMT offering	700 million	n.a.	
CyberMiles Team & Partners	100 million	2.5 years	10% per quarter
5miles	100 million	2.5 years	10% per quarter
CMT Reserve (for end-users)	100 million	n.a.	At Foundation's discretion
Total CMT at ICO close	**1.0 billion**		

In addition to the hard cap of 700 million tokens to be issued for the Token Contribution, it is proposed that another 100 million tokens will be pre-allocated to 5miles, in consideration for its role in establishing the CyberMiles platform and developing the initial ecosystem for CMT. This will be a key component of a strategic partnership in which 5miles contributes its brand, technology, and integration of its 10+ million registered users with CyberMiles and CMT. A further 100 million tokens will be pre-allocated to the CyberMiles team & partners, for developing the technology & operating the Foundation. The token allocation for both 5miles and for the CyberMiles team and partners will be subject to a long-term (2.5-year) vesting period.

A further 100 million CMT are proposed to be held in reserve for future release by the Foundation to end-users, to jumpstart the use of the CyberMiles applications and to encourage participation in the ecosystem. The CMT to be distributed is intended spur adoption of various CyberMiles processes and applications (such as voting on dispute resolution, setting up CyberMiles wallets, etc.), and completion of Smart Contracts on the CyberMiles chain.

Token Supply Schedule

As transactions occur on the CyberMiles chain and Smart Business Contracts are executed, the transactions will be processed and validated through a delegated-PoS ("D-PoS") consensus engine system, and will result in newly minted tokens to incentivize & compensate the network participants. The mechanisms for the D-PoS engine are in-development, but the CyberMiles Foundation will target an eight-percent (8%) compounded annual increase in the total number of tokens, from the close of the Token Contribution Event, until the 10th year anniversary. Upon the 10th anniversary of the Token Contribution Event, the Foundation will decide, based on the development of the CyberMiles ecosystem and with input from the community, on the targeted growth in the token supply for subsequent years. Regardless, the Foundation is proposing a long-term cap of 10 billion tokens as the maximum number of CMT tokens that can be issued and circulated.

Inflation Schedule

As discussed above, the delegated-PoS (Proof of Stake) mechanisms will be developed to effect the targeted outcome of 8% annual increase in total number of tokens, until the 10th anniversary of the close of the Token Contribution Event. Below is the targeted inflation schedule for the active supply of tokens:
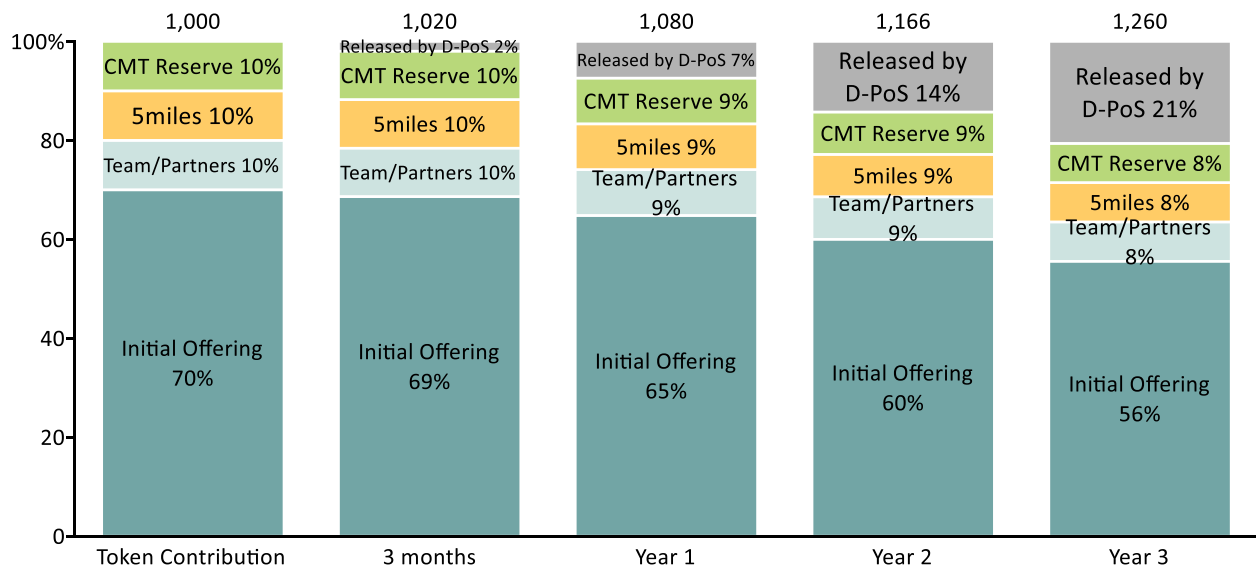
Proposed, Targeted Number of Active CMT in Circulation (millions of CMT):
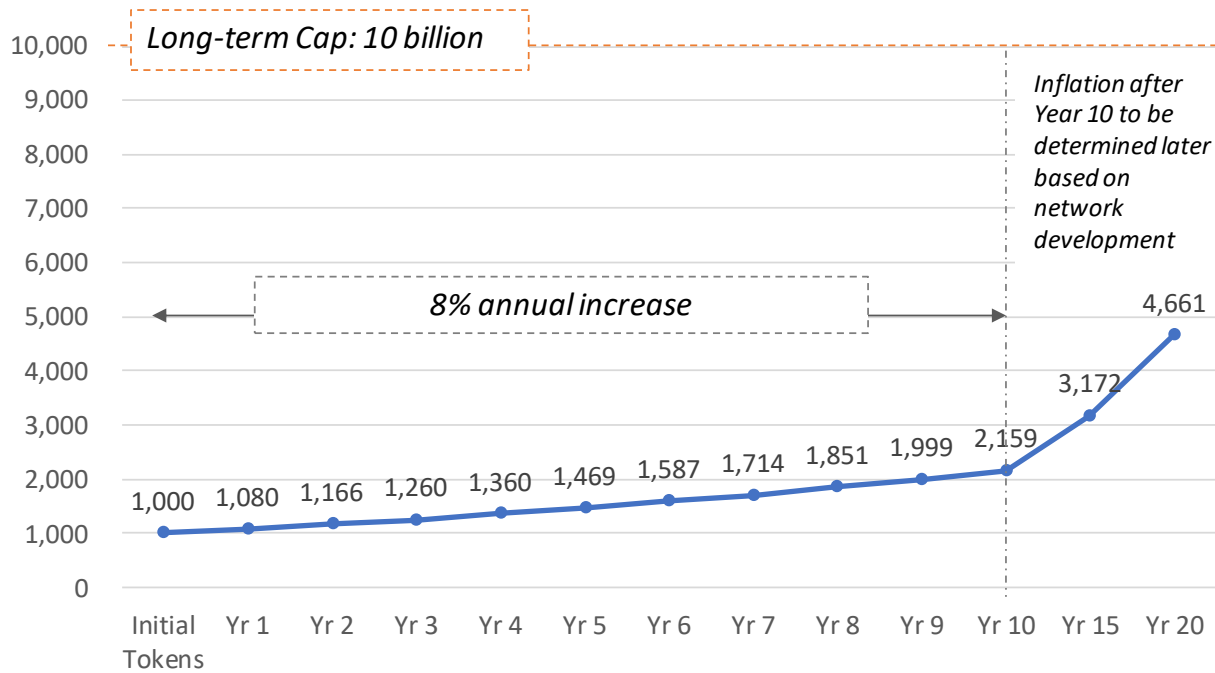
Time Series

A time series of the targeted number of active tokens in circulation, by allocation, for the first 3 years:

(bar totals: millions of tokens)

8. The CyberMiles Core Team and Advisors

- **Dr. Lucas Lu**, CEO/Founder of 5miles. Lucas received his PhD degree in Particle Physics from SMU in 2005. He worked at CERN when he participated in theoretical and experimental research of Higgs Particle. Dr. Lucas Lu, was previously a co-founder and CTO of Light In the Box, a company which went public on the NYSE, and prior to that, Lucas was the first GM of Alibaba's Taobao Mobile platform, and was the GM of another Alibaba business unit. Lucas founded 5miles in 2014.

- **Dr. Michael Yuan**, Director of the CyberMiles Foundation. Michael received a PhD in Astrophysics from University of Texas at Austin. He is the author of 5 books on software development, published by Prentice Hall, Addison-Wesley, and O'Reilly. Michael was an active code committer in large Open Source projects such as Firefox, Fedora, JBoss, and others. He is an expert on enterprise and mobile software, and was a Principle Investigator on multiple research projects funded by the US government.

- **Alex Lau**, Director of the CyberMiles Foundation. He received his Software Computer Science degree at University of North Texas in 1999. Previously, Alex worked at Nortel Network, before moving to China. He was the R&D Manager for SUSE Linux in Beijing and Taiwan and was the CTO for Symbio Mobile. He has been working as a consultant for the distributed filesystem for SUSE and as a Blockchain Consultant for WeBank and 5miles.

- **Frank Lee**, Advisor to the CyberMiles Foundation. Frank is the founder of several start-up companies. He had successfully developed the first Litecoin ASIC miner in the world. Two of his companies are included in MI eco system. He has invested in and co-founded companies in various areas, including Game, VR, AR, IOT, etc. Frank graduated from Tsinghua University with a degree in Electrical Engineering.

- **Amanda Bush**, Advisor to CyberMiles and 5miles. Amanda is a partner at St. Augustine Capital Partners, a partnership offering consulting services and strategic advice to clients in technology, energy, real estate, and financial services. She has been named a "Rising Star" by Thomson Reuters (2007-2014). Amanda co-chaired the Barbara Bush Foundation for Family Literacy's Celebration of Reading from 2003-2014. She received her B.A. degree, summa cum laude, from The University of Texas and her J.D. degree from The University of Texas School of Law.

- **Malachi Boyuls**, Advisor to CyberMiles and 5miles. Malachi is a partner at St. Augustine Capital Partners, a partnership offering consulting services and strategic advice to clients in industries such as technology, energy, real estate, and financial services. Previously, he was an attorney in Dallas at Gibson, Dunn, & Crutcher LLP, where he practiced in the firm's regulatory groups, including antitrust, energy, securities, and intellectual property. He graduated from New York University School of Law.

- **Mark Brinkerhoff**, Advisor to the CyberMiles Foundation. Mark Brinkerhoff is a startup advisor and communications strategist with a contemporary approach to public relations, a passion for building partnerships and storytelling that connects consumers and brands. With more than a

dozen years of experience in results-driven PR, Brinkerhoff has become a leader in business-driving marketing and brand communications for innovative, fast-growing startups, particularly consumer technology.

- **Garwin Chan**, CFO of 5miles. Garwin is currently the CFO of 5miles. Previously, he was a Managing Director at Founder H Fund (private equity arm of Founder Group). Prior to that, he was a Vice President at Bain Capital, a global leading investment firm. Garwin graduated from Harvard College cum laude in 2003. He also received his MBA degree from Harvard Business School in 2008.

- **Rick Cantu**, General Manager of 5miles. Currently General Manager of 5miles, overseeing business development, client solutions, and business operations. Formerly VP of Good Deeds Wireless, a mobile telecom startup, and has worked more than 20 years in TMT. Prior to his startup experience, he was a senior advisor at Morgan Stanley. He received his BA in economics at University of Texas, San Antonio.

- **Trey Troxel**, Product Strategist at 5miles. Currently our Product Strategist at 5miles, focused on commercializing the 5miles technology within the auto industry. Previously, Trey was the Director of Sales and Marketing at a large automotive group, and before that, he was a senior executive at multiple top-tier automotive software and digital platforms, including Autotrader.com, PureCars, and vAuto. He received his BA at the University of North Texas.

- **Valerie Coleman**, Director of Business Development at 5miles. Currently our Sales Director at 5miles, focused on digital solutions for "Auto & Job Classifieds". Previously, Valerie was sales director at Monster.com, and before that, she spent 15 years at Autotrader.com and Kelley Blue Book, focused on the sales of digital service solutions for large car dealerships across the country. Valerie received her BA in marketing at The University of Texas, Austin, and her MBA from Marylhurst University.

- **Natasha Mehra**, Project Manager at 5miles. Natasha graduated with a BBA degree at SMU Cox School of Business in 2008. She became a consultant under the IoT division at Accenture after gaining experience with HM Capital Partners and Challenger Capital Group. In 2010, she volunteered to help develop the local economy in Uganda and has focused on implementing product solutions for a variety of businesses and industries since.

9. Project Milestones

Apr. 2014   5miles established.

Jun. 2014   5miles receives $5 million (USD) Series A investment from SIG.

Oct. 2014   Testing of the 5miles app begins.

Jan. 2015:   5miles app launches in the US.

Jun. 2015   5miles receives $17 million (USD) Series B investment, led by IDG and Morningside.

Nov. 2015   5miles introduces user-verification and fraud-detection technology, further strengthening its' innovative marketplace safety features.

Jan. 2016   5miles' gross merchandise value reaches $100 million; receives $30 million (USD) Series B-1 investment, led by Blue Lake and Puhua.

Jan. 2017   5miles surpasses 11 million users, becoming a top 10 shopping app in the US (data from Similar Web); begins exploring blockchain initiative.

Jun. 2017   5miles receives $10 million (USD) follow-on funding from existing investors (pending closing).

Aug. 2017   5xlab formally launched, focusing on CyberMiles blockchain program; developing CyberMiles v.0.1.

Oct. 2017   CyberMiles Foundation to explore the issuance of CyberMiles tokens (CMT).

Dec. 2017   CyberMiles Foundation to launch v0.1 of CyberMiles' "smart contract" modules.

June 2018   5miles app to begin accepting CMT to facilitate multiple marketplace applications.

Dec. 2018   CyberMiles Foundation to launch v1.0 of CyberMiles.

Mar. 2019:   CyberMiles modules to be available for use on other platforms to facilitate further adoption.

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