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COMSA

- the ICO solution for centralized businesses to adopt blockchain technologies -

Whitepaper summary Rev.1.3

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Summary

Ever since the introduction of Bitcoin as a crypto currency in early 2009, we have witnessed great interest in the usage of the technology. In a span of 8 years, we have seen an astronomical growth in the landscape, with close to a thousand different projects centering on the blockchain technology. This rapid growth gave rise to the use of cryptocurrencies that are an alternate form of value transaction within the burgeoning blockchain community and which are fast spreading to mainstream use.

In recent times, there have been many newly created projects in the blockchain space that are focused on crypto-centric users, some of which are cutting edge and highly motivated to not only succeed in the initial offerings, but scale as markets and economies transform over time. On the contrary, most of the headlines by mainstream and legacy organizations/enterprises on the use of blockchain solutions are no better than a simple proof of concept. The majority of these mainstream initiatives even leverage on taglines such as “blockchain inspired” or “blockchain centered” technologies, thus giving a new impetus and interest to their existing business.

The general notion is that cryptocurrencies are inherently volatile and this feature is here to stay. In fact, volatility can sometimes be a strong selling point for cryptocurrencies, but that is also one of the largest obstacles for real businesses to adopt them. And network fees always haunt us as we try to implement public blockchains in legacy business practices such as trades, bookkeeping, guidelines, or compliance. The fees, per se, are not that they are expensive, but they become an administrative nightmare as their users should not be bothered with having to deal with managing their transaction fees.

As such, this rate of phenomenal growth has undoubtedly left many gaps that are yet to be fulfilled. The existence of these gaps has resulted in a high barrier to entry for enterprises who have trouble trying to bridge their islands of existence to the rest of the crypto and mainstream economies. We are in a state of flux and solutions are needed to address these issues.

Tech Bureau Corp. is now carrying out a token sale exercise to crystalize an effort to offer a solution to address the aforementioned problems.

COMSA Token Sale

"COMSA" is derived from ”Computer” and 鎖 (Kusari/Sa): meaning "chain," combining to make "blockchain."

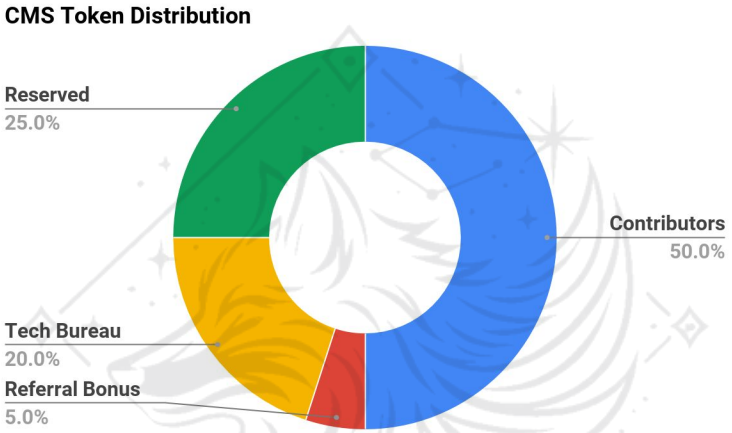
Before COMSA launches as a full-fledged service it will undergo an token sale exercise. The cryptocurrency raised from the token sale will not only fund us to expand its reach in a rapidly growing ICO market, but also to accelerate the growth of our existing core businesses, which are the crypto exchange Zaif and the private blockchain product, Mijin. Both Zaif and Mijin are core elements of the COMSA solution.

The token sale will be launched at 14:00 JST on October 2nd, 2017 and closes at 14:00 JST on

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November 6th, 2017. Below are the details of the token sale:

- Token sale participants will receive 1 COMSA (Symbol: CMS) token per 1USD equivalent contribution. No cap is set.
- At the end of the token sale, based on the number of tokens issued for the participants, an equal number of CMS tokens will be issued and issuance will be locked. In other words, 100% more will be issued over the subscribed number.
- Of this 100% more, 10% will be distributed as referral bonuses to token sale referrals. 40% will be distributed to the existing management team, stakeholders, developers, employees, contractors, and COMSA ICO committee management. 50% will be retained by Tech Bureau for future development, future distributions, marketing, partnerships, compensations, and expansions.
- As a result, 55% of the grand total will be distributed to the contributors.



Presale of CMS tokens with a 20% bonus will be available for participants who intend to contribute at least 100,000 USD equivalent of cryptocurrencies. Presale can be purchased with BTC, ETH or XEM. Please contact COMSA management team at https://comsa.io/en/#contact

Also, following time bonus will be applied for token sale.

+14% Oct. 2nd. 14:00 – Oct. 4th. 14:00（JST）
+10% Oct. 4th. 14:00 – Oct.11th. 14:00（JST）
+5% Oct. 11th. 14:00 – Oct. 25th. 14:00（JST）

Token Functions and Benefits

COMSA is a platform gateway for the aforementioned variety of blockchains. . This platform can also be used by companies that wish to carry out their ICOs. COMSA's value proposition is its infrastructure where it can offer these companies a complete ecosystem for their ICOs, which includes the Zaif Exchange, multi-cryptocurrencies subscription, cross-platform integration and a ready ICO asset creation through the use of the NEM and Ethereum public blockchains and mijin private blockchain respectively.

As part of COMSA's very own token sale, CMS holders who bought their CMS from COMSA's token sale exercise will get to enjoy a premium bonus of 5% for every CMS they use to participate in these

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future ICO campaigns on the COMSA platform. For example, if 100 CMS tokens are utilised to purchase a new ICO, the purchaser will be granted 105 of their chosen token, the 5 being a bonus as opposed to a regular purchase without the CMS token.

As detailed later in this paper, we have managed to secure interests from a few successful businesses to use the COMSA platform for their upcoming ICOs, which naturally, will create more demand for the CMS tokens.

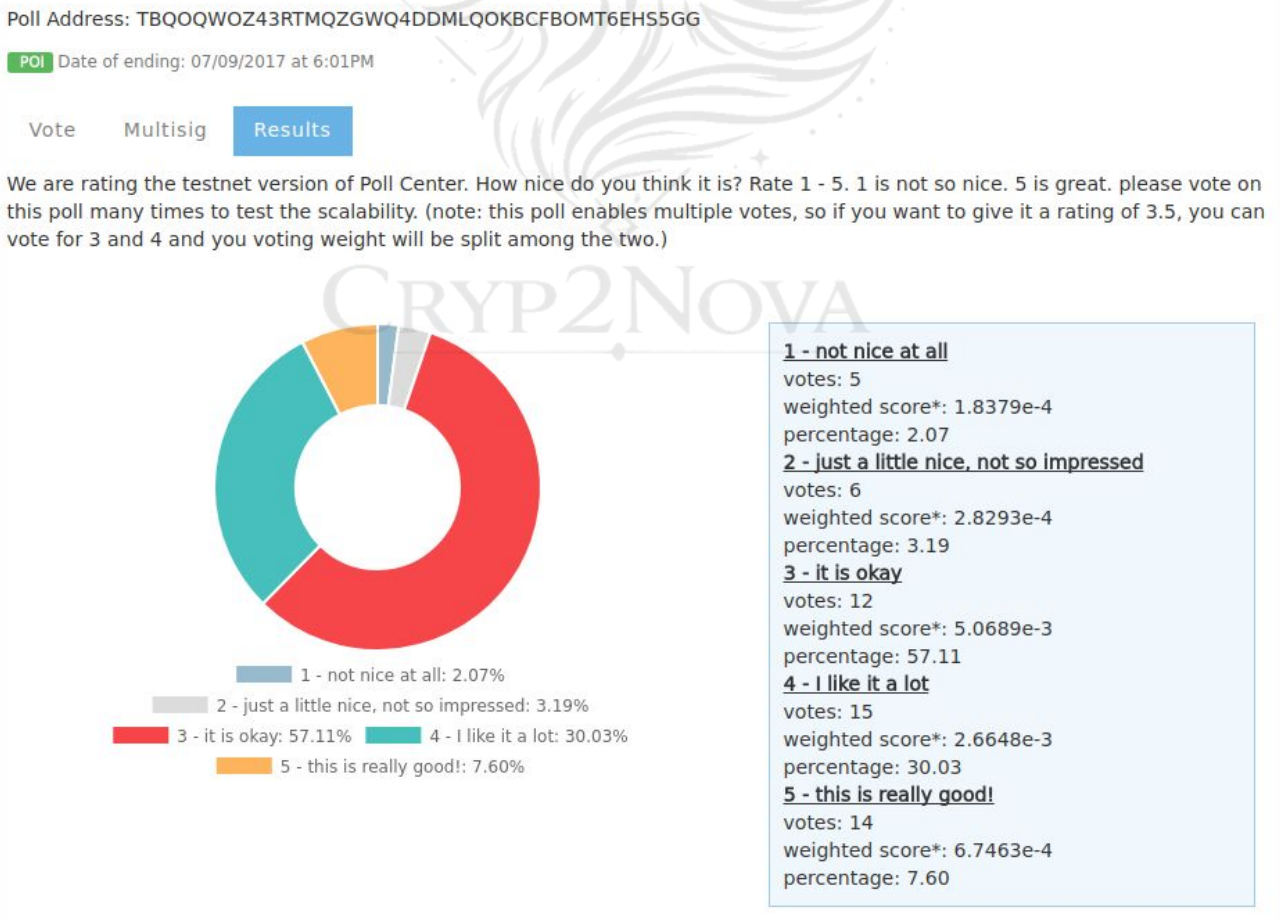
Community Vote

Although all ICO projects will be screened by Tech Bureau and the ICO Committee, there could still be challenging projects that are potentially risky to token buyers. In such cases, COMSA will escalate the projects to the community to vote.

CMS token holders will be eligible to vote for these ICO projects based on the number of tokens they hold at a certain block height to determine whether it should go ICO with COMSA or not.

COMSA will create a contract on Ethereum blockchain to allow ETH:CMS holders to vote using special voting tokens. Holders can send those tokens to specified addresses.

On the NEM blockchain, voting will be even easier. NEM's open-source wallet software Nanowallet now has an official voting module. We can allow NEM:CMS holders to vote directly from the wallet.



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Burn of CMS Token

A certain portion of revenue related to COMSA solutions will also be allocated to burn CMS tokens on the Zaif market from time to time. These revenues include:

- ICO consulting and service fees.
- Conversion fees of COMSA CORE.
- Mijin license fees and BaaS license fees.

Invitation-Only Pre-Sale of Future ICOs

As a privilege, CMS token holders will also be invited from time to time to invest in future ICO projects which are only opened to invited participants and not for the public.

Budget Allocation

Funds raised from the token sale shall be allocated for the following:

- Development of COMSA ICO token sale platform.
- Development of the COMSA CORE
- Development of the COMSA HUB.
- Development of crypto pegged tokens.
- Development of fiat pegged tokens.
- Add multi-language user interface and customer support to Zaif Exchange (English,Chinese and more).
- Add streamlined processes to list any ERC-20 tokens or NEM MOSAIC tokens on Zaif exchange.
- Add /XEM and /ETH to all the currency pairs.
- PR and marketing of COMSA solution and its related services.

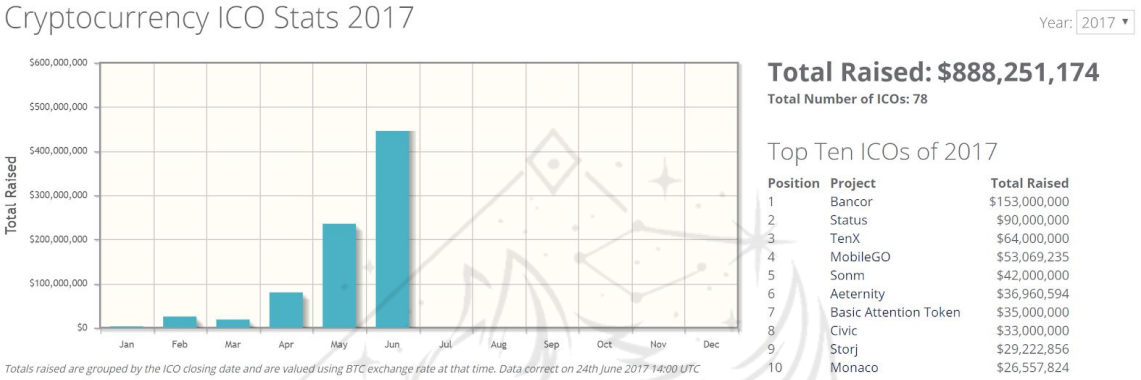
ICO Market and Industry

In June 2017, the total funds raised by ICOs exceeded the amount that blockchain startups had raised from venture capital companies for the 12 months preceding it.

Since April 2017, the ICO market has been growing rapidly by more than 100% every month, and 30 or more ICOs are being launched in July 2017.

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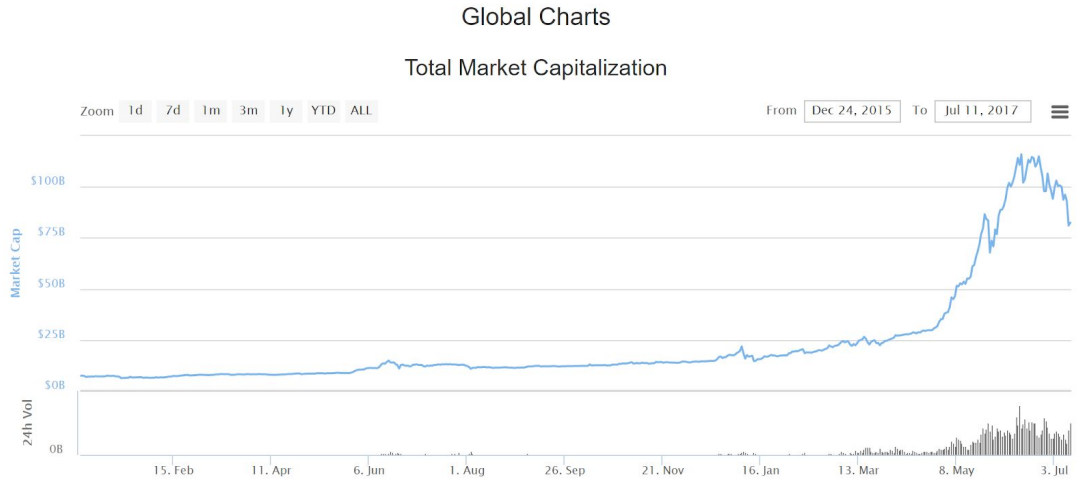


Source: https://www.coinschedule.com/stats.php



The total market cap of cryptocurrencies has risen close to 6 times in just 4 months from 20 billion USD to 116 billion USD at its peak in June 2017. Contrast this with how it took the market 8 years since the launch of Bitcoin to reach a market capitalization of 15 billion USD and it creates an incredibly positive outlook for the future of cryptocurrency.

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Source: http://coinmarketcap.com/charts/

We expect the total market cap to grow up to 1 trillion USD by the end of 2018, with the ICO market growing to more than 5 billion USD by then.

COMSA's goal is to target 100 million USD in 2018 with more than 20 ICO projects.

COMSA ICO Solution

COMSA is not just a cross-chain controller and router. It is also a conduit for future ICOs that want to exist in the COMSA ecosystem. As part of the project, a COMSA team is now already in place to provide companies with consultation, expertise and solutions to support their very own ICOs and implement blockchain technology into their business practices, all at the same time, as a one stop solution.



Given the pent up demand, the COMSA team is forging ahead to provide consultation to companies wishing to go ICO while COMSA is building its platform. These early ICOs will be using the existing infrastructure of COMSA, such as the Zaif exchange and its technical expertise to make use of the existing independent blockchains of Ethereum, Bitcoin, and NEM to raise cryptocurrencies while COMSA builds the integrated system for them to latch onto eventually. The initial services we will be offering will include:

- Business planning and service design utilizing blockchain technology, especially tokens.
- Tokenizing mainstream assets into cyberspace assets.
- Legal support for ICO and tokenization.
- Creation of a multi-language whitepaper.
- Token issuance and sale using a crowdsale platform
- Providing a market on Zaif exchange.
- Mijin private blockchain technology on the premises or on BaaS as internal ledgers.

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- Network fee delegation and fiat & crypto pegged tokens to allow existing business transactions on NEM public blockchain in fiat currencies or major cryptocurrencies.
- Smart signing contract development on the NEM blockchain.
- Smart contract development on the Ethereum blockchain.

In the future, when the COMSA platform is completed, we will include the following offerings into these ICO companies and new ICOs with the following value added services:

- Integration with the COMSA CORE
- Integration with the COMSA HUB to connect and peg between the mijin private blockchain and public ones.

COMSA and Other Upcoming ICO Projects in 2017

Instead of future decentralized apps, COMSA focuses on existing mainstream businesses to launch their ICOs. This method of ICO not only brings legitimacy to ICOs but also introduces mainstream businesses to leverage on the cost-effective, safe, and secure blockchain technology to improve their businesses and position them to be more efficient.

Starting with COMSA itself as the first ICO, we will have the following ICOs scheduled immediately after, later in the year.

1. Premium Water Holdings Inc (2588.T)

   Few more ICO projects are to be announced in Oct. and Nov. 2017.

The above are successful businesses in the off-chain world from Japan, but the COMSA solution is not limited to just Japanese businesses, we have also started inviting businesses globally for ICOs. Details of each such ICO shall be revealed and disclosed as more ICO projects are to be announced, but suffice it to say that the response so far has been great.

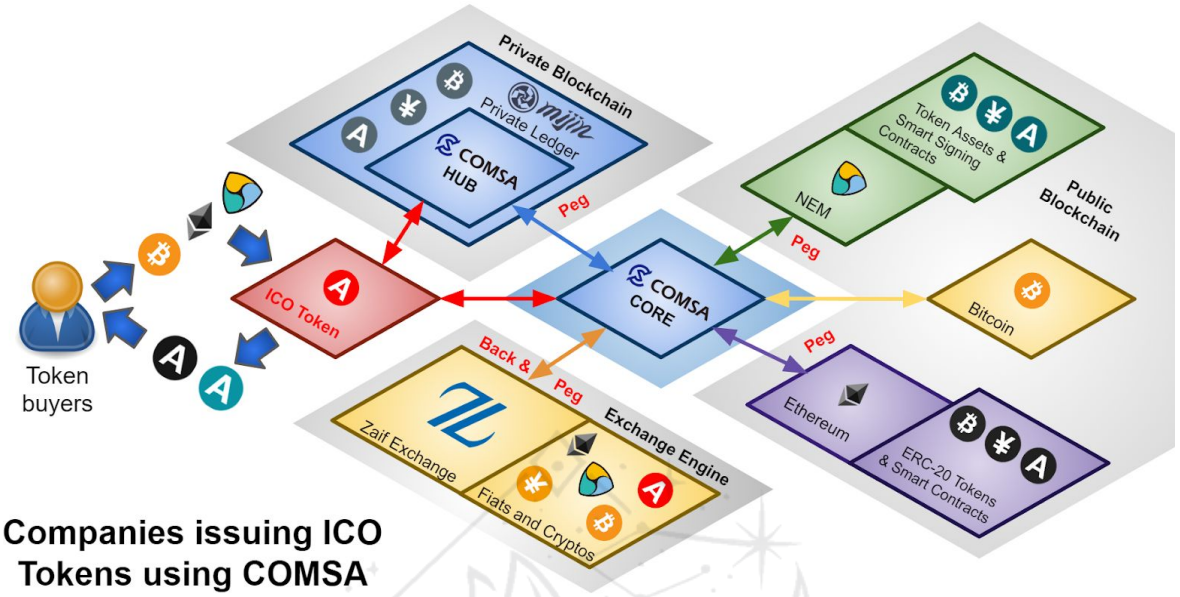
The above ICO projects will proceed ahead without our core platform offerings but will be integrated when we are ready to include the COMSA platform solution.

What is COMSA

COMSA aims to solve the problem of bridging enterprises and their existing businesses to public blockchains. COMSA is proposing to bridge NEM, Ethereum and the Bitcoin public networks together with the mijin private blockchains that enterprises will be using. The idea is to bridge these enterprises and cryptocurrency owners so as to provide an avenue for cryptocurrency owners to spend while enterprises can have an immediate and extended market to sell their products and services and continue to develop their blockchain solutions to cater for mainstream users. Additionally, this symbiosis also allows both sides of the crypto and mainstream economies to come together on a common ground, promoting the proliferation of the crypto economy into the mainstream, vice-versa, and therefore, help in the widespread acceptance of crypto currencies.

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COMSA, a project to be undertaken by Tech Bureau Corp, will carry out an ICO exercise and issue ICO tokens. This project will enable centralized businesses the ability to utilize blockchain technology and prepare them for the eventuality of being able to face a more decentralized world.



Companies issuing ICO Tokens using COMSA

No matter what protocol one is using, whether it is Bitcoin, Ethereum or the NEM protocol, enterprises can now choose the right technology to suit their requirements. Additionally, COMSA enables organizations that have already previously embarked on any of the protocols to still leverage additional services and to extend its reach to the other ecosystems offered by COMSA. This powerful utility using the COMSA platform, in combination with Zaif Exchange makes this offering a holistic enterprise class solution never seen before.

COMSA allows enterprises to remodel and monetize their organization as a private token economy on the blockchain using the strong NEM protocol, as well as the ability to utilize powerful smart contracts of Ethereum to begin building decentralized applications. By leveraging on COMSA, the deployment and implementation of a blockchain will be much easier and faster than ever before, as well as giving more breadth to the enterprise.

The NEM protocol using the mijin engine not only helps enable the business of an organization that uses it, but it also provides the bridging of existing monetary values used in trades (i.e. fiat currencies, major cryptocurrencies, etc.) onto the NEM ecosystem and Ethereum decentralized applications. By consolidating these processes, an organization can begin implementing a blockchain along with existing compliances and guidelines without affecting or disrupting its current business practices. Customers can now leverage on the blockchain in their preferred currency.

Tech Bureau's powerful private blockchain solution, mijin, also becomes a hub between a decentralized and a centralized economy. By pegging tokens between internal private and external public ledgers, businesses can build a high-throughput blockchain record of transactions. This not only allows organizations to obtain compelling benefits from the blockchain but also leverages on the resources and advantages from within these organizations.

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In conjunction with the Zaif exchange, which serves as a centralized trust-cum-exchange, that shall be approved by the regulators, FSA of Japan, COMSA offers an unparalleled service that allows a cryptocurrency (e.g., Bitcoin) to flow into the various networks and transact as if it is a coin in that network. What it essentially means is that a cryptocurrency from another blockchain can be transacted in the NEM blockchain as an asset, and with this asset being backed by Zaif as the trust-exchange. It can also be traded in the Zaif exchange as if it is a NEM or Ethereum asset. Additionally, the same cryptocurrency can flow into the private mijin network, into the enterprise services and get traded as if it is a cryptocurrency in that ecosystem. In other words, fiat-backed and cryptocurrency-backed tokens - from outside the native blockchain - can be traded, interchain, between NEM and Ethereum. As an example, one can virtually swap Bitcoin and USD on the NEM or Ethereum blockchains and can even forget about network fees in some cases as described above. COMSA brings cross fungibility of coins in the networks it serves.

This is all made possible by utilizing the new Japanese crypto exchange regulations enforced with a strong segregation fund clause – the mandatory “trust” requirement.

By pegging tokens among NEM, Ethereum, and mijin private blockchains, the COMSA solution becomes a practical “catalyst” between centralized businesses and decentralized blockchains. In addition, the offering helps contribute to the growth of the entire blockchain ecosystems in Bitcoin, NEM, and Ethereum.

In summary, the COMSA solution provides the following:

1. Hybrid token issuance pegged between NEM and Ethereum blockchains.
2. ICO solution and support using the above.
3. Crypto pegged tokens on NEM and Ethereum (BTC, ETH, and XEM)
4. Fiat currency pegged tokens on NEM and Ethereum. (JPYZ, Tether, etc.)
5. High-throughput private blockchain mijin for the internal token ledger.
6. Crypto exchange Zaif to guarantee listings of tokens and to insure pegged tokens.

The COMSA current strategy is to emphasize on bringing centralized businesses together, enhance these ecosystems with elements of decentralization, and then when the technology matures, upgrade them into additional decentralized business models. Accordingly, our policy now is to ensure that we are “as solid, as trustful, and as auditable as possible” before we emerge to be more decentralized as technologies mature. Tech Bureau recognizes how the future will be in a decentralized environment and therefore is able to bring this wealth of experience to help shape mainstream businesses in adopting and embracing blockchain technology.

With this method of solution using both private and public blockchains, COMSA works as a core controller, a hub, and a catalyst. We believe COMSA can contribute to the growth of the greater blockchain ecosystem including Bitcoin, NEM, and Ethereum by bringing more assets from mainstream into the blockchain space.

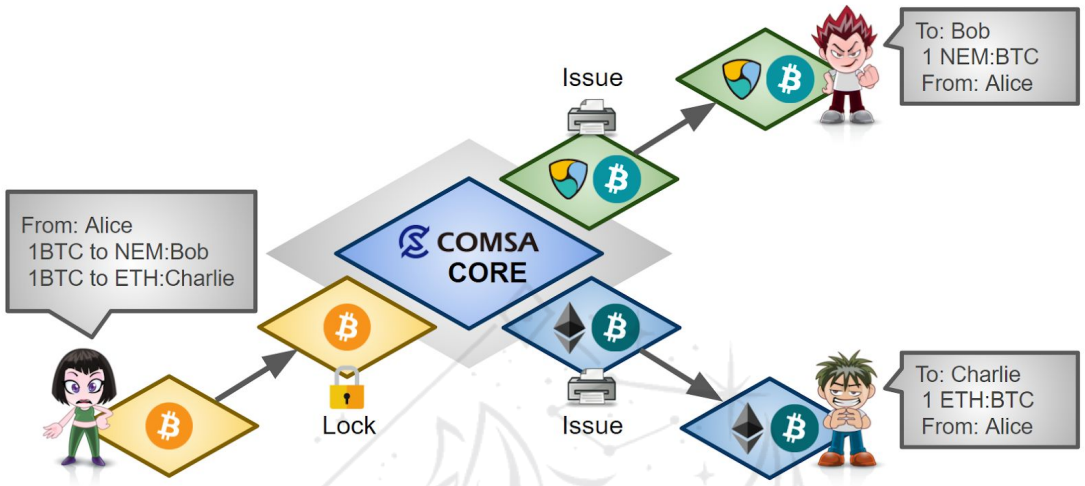
COMSA CORE

We have mentioned the COMSA CORE and COMSA HUB in the description of our project. Here, we shall define the COMSA CORE. COMSA CORE is the most essential part of our COMSA platform. COMSA CORE pegs and controls tokens between the NEM, Bitcoin, and Ethereum

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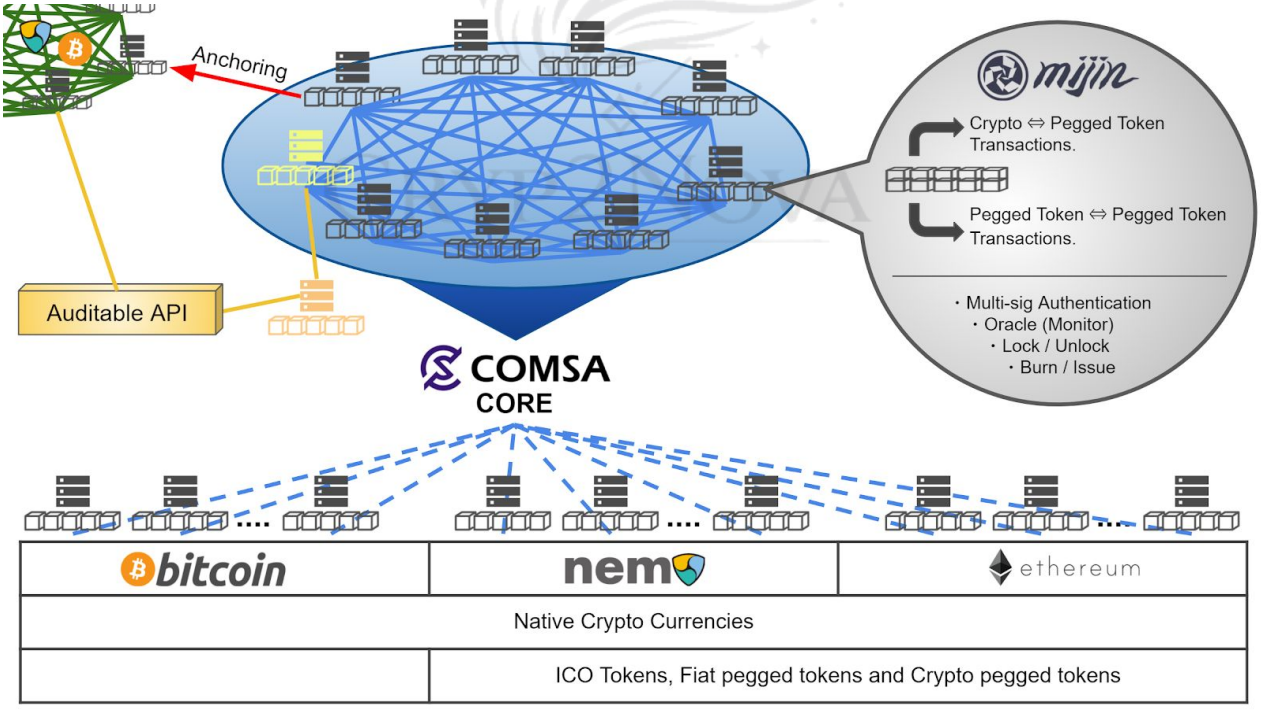
blockchains as an independent service of Tech Bureau. It converts value among cryptocurrencies into pegged tokens with the total volume controlled.

COMSA CORE monitors incoming transfers of cryptocurrencies or tokens into a COMSA master account with the final destination details embedded in them. It then locks or burns that amount in the COMSA master account. At the same time, it also unlocks or issues equivalent cryptocurrencies or tokens on the corresponding blockchain and sends them to their final destination account.



COMSA CORE = Conversion Network

COMSA CORE consists of a controlling application, an oracle application and 2 mijin private blockchain networks built on 9 cloud server machines, which are distributed globally to achieve zero-downtime token conversion service.



COMSA CORE is a hidden and private network, except for one auditable API node. 9 nodes will be totally hidden from the public and work as a conversion network independent from public blockchains.

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Zero-Downtime COMSA CORE

There will be 9 servers built in 9 regions operated by 4 cloud vendors to achieve zero-downtime service. We are currently planning a 50 tx/s capacity (4.32 million tx/day) with 8GB of RAM and 8 core CPU on each node. So far we have built dozens of zero-downtime ledgers with our clients using mijin for the last 18 months and also expect no down time with the COMSA CORE. The maximum throughput capacity stated above is for the internal ledgers only, with the performance of token conversion among public blockchains dependent upon the limitation of each blockchain.

Oracle (Monitor)

Each server works as an oracle to observe Bitcoin, NEM and Ethereum nodes for incoming transactions. The oracle analyzes the confidence level and number of confirmations for each conversion for authorizing any outgoing transactions.

Multi-sig Authenticator

Each server operates as a multi-sig signatory to sign all outgoing cryptocurrency or token transactions upon conversion. COMSA will reach consensus with X out of 9 nodes being used as signatories.

COMSA CONTROLLER

The COMSA CONTROLLER consists of 9 nodes that will control the total volume of pegged tokens among multiple blockchains. The function of the COMSA CONTROLLER includes:

- Locking and unlocking of cryptocurrencies.
- Issuance and burning of pegged tokens.

Auditable API

One of the mijin nodes will be duplicated and exposed as a publicly auditable API. This special node will not have any significant impact on the security of the private blockchain network and has no power to initiate, authorize or confirm transactions, thereby avoiding any unauthorized requests or confirmations.

Periodic Block hashes of the mijin ledger will also be anchored to the NEM and/or Bitcoin blockchain for proof of non-manipulation.

One of the main innovations of the blockchain is its auditability and as a direct result of that, a user's ability to trust the ledger's history. The main criticism often pointed at permissioned chains is that they can be easily tampered with, changed, or edited making their ledger untrustable. By anchoring the block headers of COMSA into the Bitcoin and NEM public chains, a full and transparent audit can take place allowing users to know the COMSA ledger has not been compromised up to the point that an attacker would have had to unwind and undo both the NEM and Bitcoin public chains to have had achieved their task.

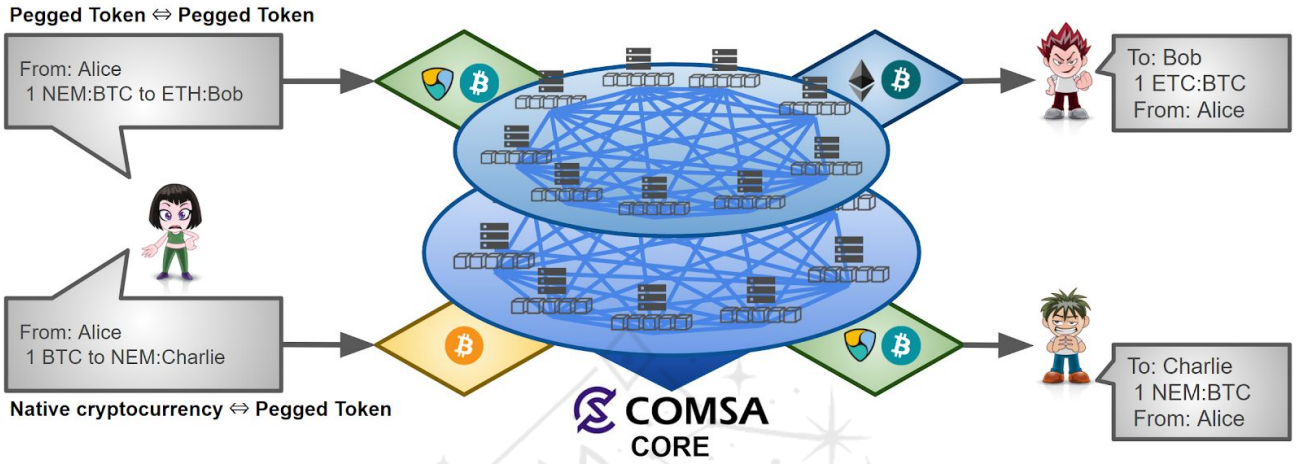
Two-Layer Ledger

As mentioned above, the COMSA CORE shall be 9 servers running 2 mijin networks..

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The first ledger is dedicated for the conversion between native cryptocurrencies and pegged tokens. And the second one is for the conversion among pegged tokens.

1. Native cryptocurrency ⇔ Pegged Token
2. Pegged Token ⇔ Pegged Token



The Advantages of Centralization

In the worst case scenario of a system failure, the total volume of pegged tokens might go off balance. A two-layer ledger will minimize the risk of inconsistency as a result of the failure. For conversions involving native cryptocurrencies, there is no way of rolling back the public blockchains. But, we can halt the operation of the COMSA CORE as a circuit breaker. We can then do a reconciliation of the discrepancy and adjust the balances accordingly.

In the event of a public blockchain facing a hard fork, as a centralized service, and like existing crypto exchanges, COMSA can halt the conversion service and decide which fork to adopt as a legitimate chain. Depending on the business rules, we could also adopt and accept both forks as 2 separate blockchains.

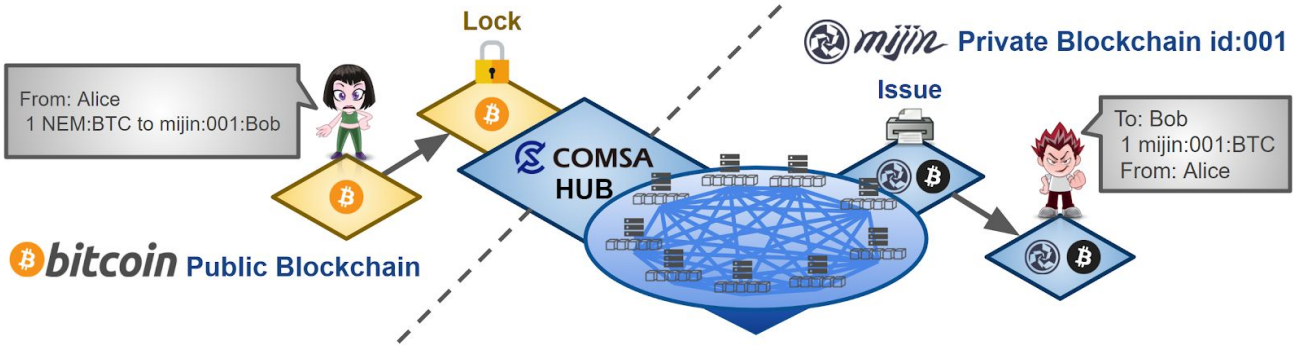
Those incidents are technically hard for decentralized applications to handle. COMSA CORE, as a centralized and independent service, will prioritize the benefit and experience of both the businesses and users.

COMSA HUB

COMSA HUB is a software for licensed holders of mijin private blockchains to control token balances between master public blockchain accounts and internal private ledgers.

COMSA HUB can be installed as a part of any mijin private blockchain network as an independent service controlled by the business using it. Compared to COMSA CORE that handles pegging among public blockchains as a service provided by Tech Bureau, COMSA HUB handles pegging between the company's assets on public blockchains and the internal ledger on the mijin private blockchain inside the company's network.

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COMSA HUB monitors incoming transfers of cryptocurrencies or tokens to the company's public master account with final destinations included in a message. It locks that amount in the company's public master account. Subsequently, it creates the equivalent private tokens inside the company's mijin private blockchain and sends it to the corresponding account. When it detects an outgoing transaction by receiving an incoming transfer to the company's private master account with the final destinations included in the message, COMSA HUB burns these tokens on the mijin private blockchain and unlocks the cryptocurrency or tokens on the public blockchain and sends them to the corresponding address.

Fiat Pegged Tokens

Fiat-pegged cryptocurrencies are set to emerge and grow rapidly in the crypto landscape. A case in point is Tether, a USD pegged cryptocurrency, which grew from a market cap of about $55m in April to about $290m in July, representing a phenomenal growth of about 527%!

A couple of projects such as BitUSD or NuBits have attempted to peg the USD to their crypto currency in a decentralized and trustless manner using their proprietary algorithms, but these have failed miserably.

Tether's approach is a centralized and privately owned service operated by a Taiwanese corporation, and is a futures contract derivative, backed by the USD. This method of pegging to the USD is a more effective way of ensuring that the peg is true to its value. More proof to it being a viable model is the that it is still being circulated, even after the halt of their USD account at the Wells Fargo bank.

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Source: http://coinmarketcap.com/assets/tether/

Tether(Symbol: USDT) is not only treated as if it is a standard USD pegged cryptocurrency at several major exchanges such as Bitfinex and Poloniex, it has also been proven that users prefer a stable pegged currency even if it is totally centralized.

The Japanese Blockchain Collaborative Consortium - BCCC, which Tech Bureau sits on its board, also has started a social experiment of a JPY pegged token, Zen (Symbol:JPYZ). JPYZ is currently a private token issued on the private Ethereum network as an ERC-20 token, and can be traded only among BCCC members. Participants were invited from BCCC's 150+ corporate members, and after 6 to 9 months of private tests, the token will be converted into a public ERC-20 token.

Using COMSA CORE, COMSA will issue pegged tokens for those major fiat pegged cryptocurrencies, and allow people to trade or contract in fiat currency virtually on the NEM and Ethereum blockchains.

Cryptocurrency Pegged Tokens

With the same logic as fiat pegged tokens, COMSA will also issue crypto pegged tokens on the NEM and Ethereum blockchains such as NEM:BTC or ETH:BTC.

Business Transactions on Public Blockchains

In a combination of fiat pegged tokens and crypto pegged tokens, COMSA is now bringing practical business transactions onto public blockchains. People can use fiat or crypto equivalent values on public blockchain for smart signing contracts on NEM or smart contracts on Ethereum.

One-time Use Multi-Party Smart Contracts

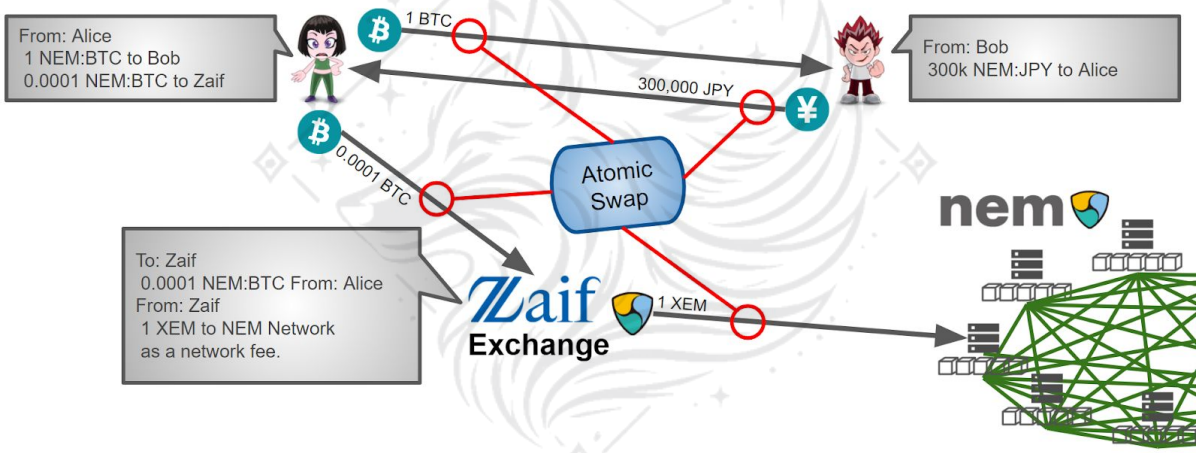
Mijin's upcoming new Catapult engine has a unique feature called "aggregate transactions". An "aggregate transaction" basically combines multiple transactions as a set, and allows them to

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simultaneously transact upon the completion of a multi-sig sign-off from all the parties involved. Note this is not accomplished via a multisig contract, it is an atomic swap, as long as the final balances are valid. This can be thought of as a one-time use multiparty smart contract that is natively supported by the Catapult Core. This new way of thinking about and executing contracts works via API calls and takes away the burden and risk of having to write a complicated smart contract designed for long term and repetitive use. Additionally, the one-time use contract will either execute or not execute as designed depending available balances. This limits the losses in contrast to longer term smart contracts that were written incorrectly and and are subject to repeatedly being attacked.

Network Fee Delegation

For an example of an aggregate transaction, let's say Alice wants to sell 1 NEM:BTC for 300,000 NEM:JPYZ, and Bob wants vice versa, but they do not have any XEM. Now, Alice can request Zaif exchange for network transaction fee, by paying 0.00001 BTC. When all 3 parties sign the request, Zaif exchange pays 1 XEM for the network fee and receive 0.00001 BTC for that service. At the same time, Alice and Bob can swap those values without buying any XEM.



This new concept allows people to carry out most of the business transactions on the NEM public blockchain without even realizing the need to use the XEM native currency for the network fee. We believe this will popularize trustless transactions in native currencies as it eliminates the need for trusted 3rd party such as escrow services.

This new feature will be introduced in the new Catapult version of the mijin private blockchain solution first, and subsequently will be implemented in the NEM public blockchain in 2018.

Demand for Centralized Service

As mentioned above, even with the long term risk of liquidation, Tether is growing rapidly as the most popular fiat pegged cryptocurrency. At the same time, instant exchange services such as Shapeshift and Changelly, also centralized services, are very popular and convenient among many users. The risk of using these services is minimum and limited to the time of a conversion and a confirmation in the destination blockchain. An asset goes through a centralized service for that instant of time, but once it is received at the destination, the asset is secured. While the blockchain

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was founded with the understanding that decentralization is a fundamental tenant, it is undeniable that centralized services are and will continue to play very important roles for the crypto industry.

COMSA uses blockchain technology to provide for these services. With COMSA, except for the fiat pegged tokens, people can minimize the risk of loss by disposing their assets instantly at the native blockchain level. If some exchanges guarantee the disposal of those fiat pegged currencies, the risk will be limited to that time frame. With COMSA, depending on the risk capacity, one can turn fiat currencies or cryptocurrencies into tokens first using the blockchain. We believe the benefits of these blockchains will override the risk of loss very easily, vis-à-vis the likes of Shapeshift or Changelly.

Japanese Regulation

On April 1st, 2017, a new law was passed and enforced to regulate crypto exchanges in Japan. Existing crypto exchanges have been given a 6-month window to register themselves with the FSA, i.e., by Oct. 1st, 2017. Tech Bureau's, Zaif, submitted its application to FSA for approval as one of the largest crypto exchanges in Japan. Approval is expected to be given by Oct. 1st, 2017.

This new Japanese regulation will enforce the need to have a proper audit of all transactions as well as requiring exchanges to have proper segregation of funds held in trust for both fiat currencies and cryptocurrencies. As a licensed and registered Japanese exchange, Zaif, will be able to utilize these segregation requirements of the regulation to provide better credibility than exchanges in other places.

All the funds received at Zaif exchange on behalf of COMSA for crypto pegged tokens and fiat pegged tokens, will be segregated as required by law.

About NEM

NEM is one of the largest blockchain/cryptocurrency projects in the world. Instead of a programing language based contract, NEM emphasizes on its Smart Asset Model and signature based "Smart Signing Contracts" available out-of-the-box via APIs. Additionally, it can utilise an off-chain smart contract to drive its transaction outcomes onto the blockchain.

The NEM blockchain solution allows the creation of uniquely defined token assets in a tree-like structure, using Namespaces and Sub-Namespaces.

With the combination of both the On-chain Smart Asset Modeling, off-chain smart contracts, and Smart Signing Contracts, the powerful NEM protocol can substantially decrease the application development time by 50%.

The native cryptocurrency of NEM is called "XEM", and it has grown its market cap by more than 100,000% in 2 years to be one of the largest cryptocurrencies in the world.

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About Mijin

Mijin is a private blockchain technology platform sold by Tech Bureau. This technology platform is developed by the same core developers of the NEM blockchain project. Based on the NEM protocol, mijin allows any entity to build high transaction throughputs in a private blockchain using a peer to peer network.

Mijin has various use cases which prove it to be a robust and practical blockchain product. These use cases include:

- World's first bank ledger solution to be tested by a Japanese Internet bank.
- World's first application for micro financing by Infoteria.
- High throughput loyalty point system by Hitachi Solutions.
- Logistics POC for Seino Transportation Co.,Ltd.
- POC for Chubu Electric Power Co.,Inc.
- More than 300 businesses testing or using the mijin in the CloudChain beta program hosted by Sakura Internet: NEC, NTT Data Getronics, TIS, NRI, and more.

About Ethereum

Ethereum is an open-source, public, blockchain-based distributed computing platform featuring smart contract (scripting) functionality, which facilitates online contractual agreements. It provides a decentralized Turing-complete virtual machine, the Ethereum Virtual Machine (EVM), which can execute scripts using an international network of public nodes. Ethereum also provides a cryptocurrency token called "ether", which can be transferred between accounts and used to compensate participant nodes for computations performed. "Gas", an internal transaction pricing mechanism, is used to mitigate spam and allocate resources on the network.

Source: https://en.wikipedia.org/wiki/Ethereum

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About Zaif

Zaif is one of the largest crypto exchanges in Japan. It is the oldest operating Japanese Bitcoin exchange, having established itself since Apr. 2014, after the failed Mt. Gox exchange as a Japanese Bitcoin exchange.

Zaif will provide the following services as part of the COMSA solution.

- Listing of ICO tokens.
- /BTC and /ETH pairs for all COMSA initiated cryptos.
- Backing the pegged tokens issued by COMSA with segregated funds.
- Multi-language support. (English and Chinese are planned in the year 2017.)
- Payment services to allow holders to pay in ICO tokens.

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About Tech Bureau

Tech Bureau is an international Crypto-Fintech Lab founded by Takao Asayama in 2014 in Japan. Tech Bureau had acquired Japan's oldest and operating Bitcoin exchange "Etwings" in early 2015, and relaunched it as "Zaif" in Apr. 2015. Zaif has been a token oriented crypto exchange since Aug. 2016.

Tech Bureau has raised 100 million JPY in the seed round from NTVP, and 830 million JPY in the series A round from a consortium of a few venture capital companies. Its investors vary from financial institutions to technology companies, which include Money Partners Group, Infoteria, OKwave, Hiroshima Capital, FISCO and CAICA.

Mijin is a commercial private blockchain product developed by Tech Bureau in cooperation with the 3 NEM core developers. Mijin is launching a new version, "Catapult", in the summer/fall 2017 and it will be an essential part of the COMSA solution.

Tech Bureau impact has been strong on listed companies in the Japanese stock market since Dec. 2015. In the report "Computer Services Industry Fintech and blockchain: The impact on Japan's IT services sector", Bank of America Merrill Lynch says, "We see the penetration of the Mijin blockchain-based platform from Tech Bureau (an unlisted company) as an indicator of the potential earnings impact on the domestic IT sector."

The report also said, "We would cite Tech Bureau as a company playing a central role in the use of blockchain technology in the Japan market. The venture company develops the Mijin blockchain platform, operates the Zaif domestic Bitcoin exchange, and is at the forefront of blockchain technology with joint development of services utilizing licensed technology." They further mentioned Tech Bureau as the "Technology central to spread of blockchain adoption".

Source: https://www.dropbox.com/s/c7aug6w5wisvgsv/meryllynch-report2016-english.pdf?dl=1

Tech Bureau Executives

Takao Asayama
CEO of Tech Bureau Corp. Council member of NEM foundation. Director of BCCC - Blockchain Collaborative Consortium and JCBA - Japan Cryptocurrency Business Association.

Jaguar0625
A.k.a "Jaguar0625". Mijin CTO of Tech Bureau Corp. Lead core developer of NEM blockchain project and also mijin private blockchain product.

Ryosuke Hosoi
Zaif CTO of Tech Bureau Corp.

Mitsutoshi Fukunaga
CMO of Tech Bureau Corp.

Kazunobu Hatta
CFO of Tech Bureau Corp.

Tom Beno
US region manager of Tech Bureau.

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Legal Advisors

Michio Asayama
Co-founder and legal advisor of Tech Bureau.
Partner attorney at law of Kotohira law firm.

ICO Committee Members

The ICO committee established by Tech Bureau are proven, credible and important persons from various communities and industries. Along with the Tech Bureau executives, the committee will provide consultation and support the development of the COMSA solutions, invite businesses as ICO projects, and/or discuss about the future ICOs.

Lon Wong
President of NEM.io foundation. CEO of Dragonfly Fintech, Singapore.

Jeff McDonald
Vice president of NEM.io foundation.

Kazutaka Muraguchi
COMSA partner. Venture capitalist and CEO of Nippon Technology Venture Partners.

Yoichiro “Pina” Hirano
CEO of Infoteria Corp. (TYO:3853)

Yokiko Nishimura
General manager of public relations and business development
Money Partners Group (TYO:8732).

Hitoshi Kano
CEO of Fisco Ltd. (JASDAQ:3807)

Ryuji Yagi
CEO of Caica Inc. (JASDAQ:2315)

Kaneto Kanemoto
CEO of OKWAVE (NAGOYA:3808)

Yosuke Iwai
CEO of Arara Inc.

Nate D'Amico
CEO of Reactor8

Kunihiro Tanaka
CEO of Sakura Internet Inc.(TYO:3778)

Osamu Ogasawara
CEO of ABBALab inc.

Katsuaki Sato
CEO of Metaps Inc. (TYO:6712)

Masahiko Ito
Senior Deputy General Manager of Corporate Planning Division / Senior Chief Manager of Center of FinTech Office
Mitsubishi UFJ Trust and Banking Corporation

Ken Shishido
Tokyo Bitcoin Meetup Group

Tetsuyuki Oishi
CSO of United Bitcoiners Inc.

Jin Nakamura
CEO of MONEY DESIGN Co., LTD.

Noriyuki Hirosue
Founder / CEO of bitbank,inc.

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Partners

Nippon Technology Venture Partners

NTVP - Nippon Technology Venture Partners is one of the leading Japanese venture capital companies specialized in investments for high-tech businesses. NTVP is known for investment in DeNA, and was a seed investor of Tech Bureau. Its recent portfolio includes Robotics, AI, and blockchain technology.

Infoteria Corporation.

Infoteria Corporation is a leading software company providing connectivity across “computers”, “people” and “things” with leading edge technology. Its best-selling middleware – ASTERIA – already supports blockchain for enterprise companies. We are eager to enhance our product features such as supporting multi-sig with non-coding environment, and exploit new markets such as ICO for various industries.

FISCO

FISCO Ltd. is a Japanese financial information vendor. FISCO provides investment information to dedicated terminals such as QUICK, Reuters, and Bloomberg; Internet portal websites such as Yahoo!, MSN, and InfoSeek; and a number of securities companies. As a group of professionals, FISCO provides investors the best investment support services based on deep understanding and knowledge of investment and markets. Distribute ICO market information as a COMSA partner.

CAICA

CAICA CAICA Inc. is a Japanese system integrator. CAICA has a strong track record in system development for financial institutions such as banks, securities companies, and life insurers. CAICA’s strengths are centered particularly on development of settlement systems for financing, forex, sales office terminals, and online banking. CAICA collaborates with Tech Bureau in a wide range of fields to test and sell blockchain technology. CAICA is an alliance partner in providing testing and support services and system development for Tech Bureau’s “Mijin” blockchain.

arara

arara in Japan is one of the largest private e-money and CRM solutions in SaaS market. arara is providing new, safer and more efficient solutions utilizing the blockchain technology. In the cooperation with Tech Bureau and ICO committee, arara plans to develop and provide ICO related services.

COMSA Resources

Official Website

http://comsa.io/

Official Telegram

https://t.me/comsaio

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Official Slack

http://comsa.herokuapp.com/

Latest Whitepaper

http://i.nf/comsawpen

Official twitter

https://twitter.com/comsadotio

Official Facebook Page

http://i.nf/comsafb

COMSA Roadmap

https://comsa.io/en/roadmap

COMSA FAQs

What does “COMSA” stand for?

We simply translated “Chain” of “Computer Chain” into Japanese kanji “鎖 (Kusari / Sa)” and created a new word “Com Sa”. It is also pronounced in the same way as French phrase “Comme ça”, which means “like this” in English. We would like to lead the market to show how real world businesses can utilize blockchain technology “like this”.

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APPENDIX 1 - Use Cases

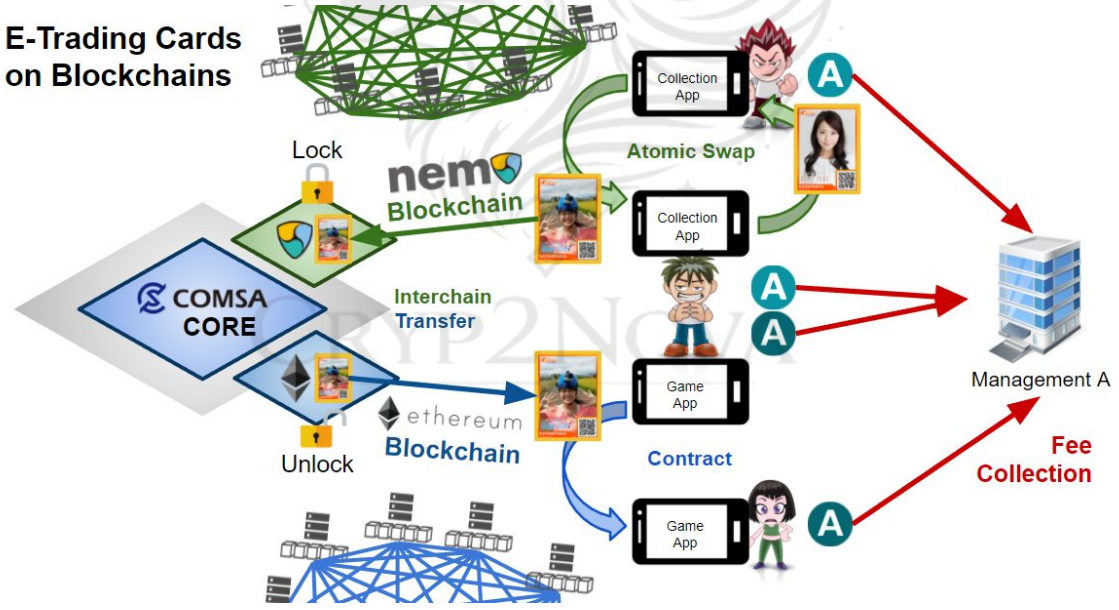
Use Case - Talent Trading Cards -

Let's say some talent management business "A" is to issue trading cards for dozens of talents. "A" issues token asset for each talent on the NEM blockchain and provides an app for users to make a collection of these cards.

COMSA first supports "A" to go ICO for "A token" as its central currency. "A" raises a certain amount of funds to develop trading card services and apps.

"A" creates 10,000 trading cards per each talent as token assets on NEM blockchain. Users have to obtain "A token" first to buy any trading cards from "A" or in the exchange market. Trading cards get added into the app as users collect them one by one. These cards can be swapped or transferred directly among users, or traded at Zaif exchange.

Users send those cards to the game app to play it, and playing rules are written in public smart contracts on Ethereum network. For token transfer between apps, COMSA CORE converts NEM assets into Ethereum tokens. All the fees will be charged to users by "A" in "A token" to cover network fees. The game app also allows users to win trading cards from other users which automatically gets transferred into their app. These trading will be converted via COMSA CORE.



Instead of managing the inventory of trading cards using raw secret keys or some token devices, "A" builds an inventory management system with the mijin private ledger. Any transfer of newly issued tokens can be authorized only by a multi-sig sign-off between designated operators and the management team.

Asset information will be disclosed openly, and developers can create their own apps or web services to handle trading cards. "A" withholds all the copyrights of trading card images and can protect them from unauthorized commercial usages.

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“A” allocates a portion of revenue from new card crowdsales and conversion fees to buy back and burn “A token”.

Use Case - VR World Currency-

Virtual Reality is a novelty and is becoming a craze. At the same time, it is undergoing a paradigm shift in its use and sophistication. New virtual reality games will need to have a dedicated currency for each game in the virtual economy. The Linden dollar for second life is one such example.

A Blockchain solution, especially if it is running on a private network where there is more control and flexibility, is very suitable for VR games, vis-à-vis public chains that may have other issues running it.

COMSA is a well suited solution where currency tokens in the public blockchain can be integrated into the internal and private blockchain of the VR game using the mijin private blockchain. These ledgers will be synchronized and balanced using the COMSA HUB.

This tightly coupled integration allows users to send and receive tokens from outside the VR realm to a specific user in the VR realm that is powered by the mijin private blockchain. Further, the currency can be in any denomination such as ICO issuer’s token, Bitcoin, XEM, Ether, or even fiat currency pegged tokens.

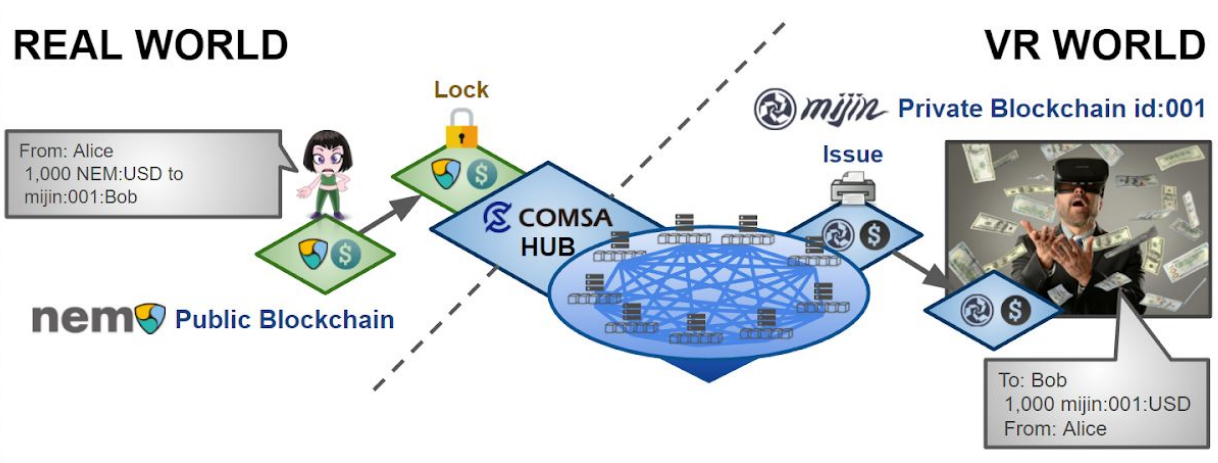
This method of VR balance management now uses the blockchain to manage balances instead of a legacy database. Essentially the blockchain solution makes this more secure and efficient. The COMSA offering also allows token transfers to be ubiquitous in a few more public blockchains, thus covering a wide market.

A private blockchain enables a much higher throughput in excess of one thousand transactions per second, hence enabling micro transactions in real-time in the VR environment. This allows for VR games to be run on a blockchain, while at the same time, allows for public blockchain tokens to be useable in the VR platform.

VR token balance cannot be changed and can easily be audited using the APIs in the mijin private blockchain. Hence fraud, and manipulation of token balances is full-proof in the blockchain environment.

This highly secure environment prevents a lot of fraud from happening and also allows for user peace of mind that they can send money or cryptocurrencies into the VR environment and be sure that their token balances will not be changed or manipulated.

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In the above example, COMSA bridges Alice's NEM:USD (public blockchain) to Bob by way of sending an equivalent pegged amount of mijin.001:USD to Bob in the VR private chain, all made possible using the COMSA solution.

Use Case - IoT Authentication & Ledger -

In a IoT era, we have to manage millions of devices and million account balances for monetary values exchanged among them.

Blockchain technology can be the best answer for IoT to manage them, and COMSA solution would be most suitable.

Capacity problem always haunts us when talking about the public blockchain. There are several developing technologies such as sidechain or lightning network but COMSA proposes a realistic solution utilizing private blockchain networks instead of an add-on layer technology.

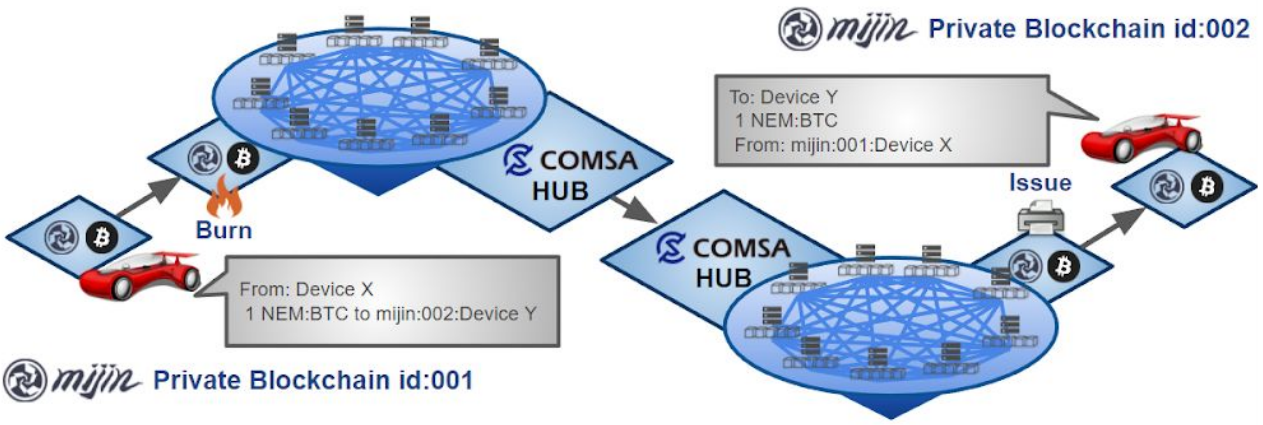
An address generated by a device can be used among multiple mijin networks with the same address. COMSA HUB lets multiple mijin networks talk to each other to sync and peg tokens, while at the same time its balance is kept consistent among these mjin networks and even on public blockchains such as Bitcoin, NEM, or Ethereum.

Any device can be authenticated using a multi-sig request on a private blockchains, that can handle high throughput transactions.

This allows devices to have their own monetary balances settled as micro transactions for their micro jobs they have done, and at a high throughput.

The ledger itself can reside inside or outside of devices. Without compromising the security, mijin let these devices interact with multiple private blockchains on the Internet.

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With COMSA, now those devices can handle fiat pegged tokens or cryptocurrency pegged tokens directly. The owner of devices can control who can transfer the balance in the devices and to where, and can even deactivate them by removing its key from the device in case the device goes out of control. All these authentication and controls can be done using the native NEM protocol in a public blockchain or mijin private blockchain.

These mijin networks not only can handle value or money transfers, but they can also encrypted t messages embedded on transactions. For example, one can send an order to her car to update its firmware via Over-the-air, that can be opened only by the car itself and authorized by a multi-sig. All these messages or requests can be sent via the Internet instead of VPN.

Controlling IoT devices, and managing their ledgers are easier than ever with COMSA solution.

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APPENDIX 2 - Change Log

Change Log

Date	Rev.	Updates
08/03/2017	1.0	First version released.
08/15/2017	1.1	“Community Vote” added to “Token Functions and Benefits”.
10/02/2017	1.2	Fixed typos. Time bonus details added. ICO project list updated. Committee member changed.
03/08/2018	1.3	Committee member and Legal adviser changed.

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