BitMinutes

Prepaid Minutes Powering

Free Global Value Transfer and Guaranteed Micro-Lending

“Better Crypto for a Better World”

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Executive Summary

"For entrepreneurs in developing countries, the idea of securing a loan to start a business is not just difficult, it's next to impossible. This stark reality is faced by entrepreneurs in developing countries every day."

–Morgan Stanley, Micro Finance in Developing Worlds

WHAT ARE BITMINUTES?

Smart Token Chain Inc. invented BitMinutes, a unique solution to address the special needs of the underbanked by combining tokenization technology and prepaid phone minutes (or "airtime"). BitMinutes are a global standard compatible with every major mobile phone carrier whose prepaid phone minutes are routinely transferred and traded between users within a single carrier. BitMinutes creates global interoperability between those carriers.

BitMinutes has received a no-action letter from the Liechtenstein Financial Market Authority (FMA) on August 10, 2018. BitMinutes can be converted to the ERC20 Token Standard, based on the Ethereum platform. These BitMinutes utility tokens (BMT, or BMTs plural) combine blockchain and smart contract technologies into an architecture that, through third-party applications, offer guaranteed lending, free global value transfer and prepaid airtime top-ups. As an encrypted token backed by prepaid minutes, BMTs can be used today by approximately 4 billion prepaid mobile phones in 130 countries, and bank or mobile accounts in 70 countries. BMTs enable frictionless movement of money and minutes across global financial networks, mobile network carriers and emerging blockchains.

BitMinutes can have global societal impact; potentially affecting over two billion unbanked adults worldwide. The overwhelming majority of unbanked adults worldwide are financially disenfranchised women who lack job opportunities in their rural communities and are burdened by the demands of caring for their families. The wide-reaching accessibility of BitMinutes and the socially oriented low-cost financial services it enables, can improve the lives of men, and especially women, on a global scale.

Financial Services Use Cases

The underlying BitMinutes protocol permits access to lending, payments and prepaid airtime capabilities across global third-party retail agent, mobile wallet and banking systems. Several third-party applications are using BitMinutes as follows:

- BitMinutes are currently integrated with Mastercard's global disbursements network. This permits BMTs to be converted to cash by third-party exchanges and directly deposited into bank accounts and mWallets.

- BitMinutes can be leveraged as collateral for loans, increasing the spending power and amount of working capital available for borrowers.
- The payments and usage history become big data and is utilized by a BitMinutes AI engine to calculate a proprietary “TAN Credit Score” algorithm for use in micro-lending.
- Selling and lending BMT-based microloans creates a business opportunity for entrepreneurs globally; turning the corner retailer into the corner banker, and delivering banking services to the smallest of villages worldwide.

BitMinutes Technology

BitMinutes technology harnesses the decentralized power of both Ripple and the Ethereum blockchains by leveraging the digital ledger behind user data for extending credit, transferring value, making purchases and using airtime.

BMTs provide auditability and government monitoring. BitMinutes meets and/or exceeds international payment security and Anti-Money Laundering (AML) standards. BitMinutes accomplishes Know Your Customer (KYC) requirements through an ISO 20022 standardized format of retrieving and storing identity information of financial transaction participants. Every BitMinutes transaction settles in real time with an immutable copy of the transaction embedded on the Ethereum or Ripple networks.

Built originally to comply with traditional settlement networks, BMTs are “The Bridge” between the traditional settlement world and the new, emerging blockchain world, starting with Ripple and now Ethereum. BMTs were first offered to the public in 2014 and BitMinutes currently operates a live technology platform.

Mining Solution

Traditionally, mining requires expensive hardware such as graphic processing units and massive power supply. BitMinutes solves this problem by enabling cloud-based mining for all its mobile app users.

Summary

BMTs solve major hurdles in providing financial services to the underbanked. The BitMinutes model adds liquidity to a major global asset class of prepaid minutes, establishes credit history for the global unbanked, and reduces the cost of value transfer through third-party systems.

Global Consumer Financial Problems

TARGET MARKET -
2 Billion Underbanked Consumers

Background

- There are over two billion underbanked consumers, a majority with mobile phones
- Total global consumer demand for credit is a $42T+ market, and growing
- The global person-to-person value transfer market is $600+ billion with over $60 billion in transfer fee revenue
- Prepaid mobile minutes constitute another $650+ billion global market, spread among 300+ phone carriers

Current financial services simply are not affordable for low-income users, especially in the developing world. Other barriers include distance from a financial services provider, lack of proper documentation and lack of trust in financial services providers. In turn, banks typically decline to offer solutions to these individuals, citing risks related to lack of consumer collateral, credit history and low profitability. Compounding the problem, the most vulnerable individuals are the most financially excluded, especially women and the rural poor.

The current global banking system is failing these two billion potential customers. Without formal banking relationships or bill payment history, the underbanked have little if any access to credit. To build a financial footprint, an electronic monitoring and evaluation system must be in place which is lacking across much of the developing world.

BMTs, based on international bank standards, simply leverage prepaid minutes already used as a virtual currency to create unique financial capabilities for third parties. Specifically, BMT utility tokens can be transferred between any two cellphones worldwide at zero cost (barring text message data rates).

The following summarizes the financial issues unbanked consumers face and how third parties could use BMTs to solve and address these challenges.

Problem - Lack of Credit

Since 2011, new technologies, innovative business models and ambitious government reforms have combined to cut the ranks of unbanked adults by about a fifth, or 500 million. Yet two billion adults, or 38% of all adults worldwide, remain excluded from the financial system today.

Geographic View: The vast majority of them live in developing economies, where 46% of adults are unbanked, compared with just 6% of adults in high-income OECD economies. South Asia, East Asia and the Pacific are home

to more than half the world's unbanked. In South Asia, about 625 million adults lack access to a banking account; in East Asia and the Pacific, about 490 million. Indeed, just three Asian countries—India, China, and Indonesia—together account for almost 40% of unbanked adults globally. Sub-Saharan Africa, with about 350 million unbanked adults, accounts for 17% of the global total.

Demographic View: The unbanked are poor and disproportionately female. While global growth in account ownership has been impressive, notable gaps persist between some groups. There are striking differences by gender. Worldwide, 42% of women are unbanked, compared with 35% of men - a gender gap of seven percentage points, just as in 2011. In the developing world, the gap reaches nine percentage points - also relatively unchanged. But it varies widely across regions, ranging from 18 percentage points in South Asia to four percentage points in East Asia and the Pacific. Overall, women make up 55% of the world's unbanked population. Differences also emerge by household income. The poorest 40% of households account for about half the world's unbanked - about 1 billion adults. Since 2011, the average gap in account penetration between adults in the poorest 40% of households and those in the richest 60% in developing economies has narrowed by six percentage points - to 14 percentage points. But this change was driven almost entirely by growth in account ownership among the poor in East Asia and the Pacific; in all other regions, the gap remained about the same."

Source: World Bank

Without formal banking relationships or bill payment history, the unbanked have little if any access to credit. To build a financial footprint, an electronic monitoring and evaluation system must be in place; however, it is lacking across much of the developing world. Since prepaid minutes are routinely used as "grey market" virtual currency, BitMinutes solves these issues and are positioned to serve a consumer market already primed for BitMinutes.

Solution - New Digital Credit

Third parties can convert BMTs prepaid minutes value into "Instant Digital Credit" to pay bills, purchase goods and services online, and/or for direct deposit to bank or mobile accounts. For instance, when used to fund a prepaid Mastercard, BMTs could be used to purchase goods and services online and anywhere Mastercard is accepted.

M-Pesa created a payments standard within Kenya accounting for over 50% of the entire country's GDP. BitMinutes, leveraging ISO banking standards, created a similar global model providing a digital means to get credit, pay bills and make purchases online through third-party applications.

Problem - Lack of Financial Service Providers

Globally, there are millions of small retailers selling everyday items to billions of consumers. We believe these retailers are the perfect candidate to provide widespread banking services to their captive customers. M-MPesa's success in Kenya was based on the efforts of its 30,000+ retailers and an unregulated payment system.

BitMinutes, in conjunction with its marketing partners, offers a similar opportunity for entrepreneurs (individuals and micro-merchants) and businesses (telecoms, banks, retailers) to enable widespread service distribution. This becomes a next generation financial services ecosystem powered by BMT technology.

Solution - A New Entrepreneurial Opportunity - The Trusted Agent Network (TAN)

Through third- party solutions, retailers and any entrepreneur can buy, sell and make loans based on BitMinutes. BMT technology enables the corner retailer to become the corner banker, increasing their revenues with new financial services while providing a valuable service to their local community. Via the third-party Trusted Agent Network (TAN) retailer application, the retailer mobile wallet and mobile applications are part of the platform offering to strategic partners, such as entrepreneurs and businesses.

Problem - Expensive Money Transfer

Cash transfers are expensive (ranging from 5–20%), increasingly scrutinized by governments and very difficult to deliver to the typically underbanked recipient, especially in rural areas. With a strong mobile phone presence in most countries, cash can now be sent directly to the recipient's cellphone into a mobile wallet (or mWallet), which are becoming more common in developing countries.

Solution - FREE Money Transfer

Though BMTs are simply prepaid minutes, third parties may use BMTs to offer consumers the ability to send cash between cellphones instantly at no cost to the consumer.

Problem - Mobile Money Adoption

Imagine a bank that would allow its depositors to use cash that was only valid at their bank and no other bank. While there is currently a global "Gold Rush" to provide financial services to billions of unbanked mobile phone users that is exactly what these new mobile wallet (mWallet) platforms are doing. They do not communicate with each other. This is done by design to lock the user into the respective system provided by the bank/telecom partnership (the "walled garden" approach). Consequently, conversion of value and management of services between these systems is problematic at best and impossible in most cases. Similarly, incompatible wireless networks combined with high transaction processing fees strongly discourage mWallet adoption in general.

In order for widespread adoption of mWallets, it must be as easy to lend or transfer value between entities (merchants, consumers, etc.) using a cellphone as it is today with cash. Through third-party applications, BitMinutes provide this solution.

Solution - Mobile Value Powered By BMTs

The BitMinutes model solves for the adoption issue by providing a widespread, consistent retailer practice for financial services distribution. Thus, third-party applications can make loans, transfer minutes and make simple withdrawals/deposits as easy for consumers as using an ATM in the developed world.

BitMinutes - *The Global Mobile Value Transfer Mechanism*

BitMinutes Create the Prepaid Minute Economy

BitMinutes enable airtime to be shared between subscribers on different telecommunications networks. Using third-party apps, subscribers can buy and sell their airtime through their mobile app. Once subscribers buy or receive BitMinutes, they can redeem their BitMinutes for use as airtime on demand. BMTs' proprietary Smart Token architecture permits interoperability between carriers the same way it facilitates transfers between networks like SWIFT, Mastercard, Ripple and Ethereum.

Today, BitMinutes can provide phone minute top-ups to four billion prepaid mobile phones worldwide. Through partnerships with leading airtime vendor aggregators, BitMinutes integrates directly into their network ecosystem, providing a seamless airtime top-up experience. The recipient of the airtime top-up does not need to have a compatible mobile wallet. The airtime is sent directly to their subscriber number and immediately credited to their prepaid account.

Mobile Operator Problem: Losing the Underbanked Battle to Banks

Although BMTs ultimately benefit the consumer, BMTs also benefit Mobile Network Operators (MNOs) and their entire distribution chain, including the network of retailers who sell prepaid minutes.

Many carriers provide prepaid minutes transfer infrastructure and/or mobile wallet services, but consumer uptake has been lacking. Carriers have a consumer's prepaid minutes purchase history, but lack the experience, capabilities and ability to issue forms of digital credit. Furthermore, banks have erected regulatory hurdles that prevent carriers from leveraging their extensive distribution networks.

Mobile Operator Solution: Leverage National Retailer Footprint

BitMinutes can be converted to virtually any major prepaid MNO minutes that already have large networks of agents who sell those MNO prepaid minutes. BitMinutes convertibility means that every MNO reseller will be able to receive compensation over their existing electronic clearing networks for lending, selling and redeeming BMTs. This clearing compatibility means the major MNO resellers will be eligible, and with the proper financial incentives, interested in becoming a TAN Agent. For those countries and MNOs without a digital distribution network, the BitMinutes and TAN mobile applications provide that infrastructure.

BitMinutes is already integrated with a global aggregator of over 300 MNOs that service over four billion mobiles today.

BitMinutes Use Case Analysis

Total Addressable Market Analysis

BMTs provide liquidity and therefore increase fluidity, velocity of money and use of value in several large global markets. The estimated sizes of each of the four markets that BitMinutes enables third-parties to address are outlined below:

Global Consumer Lending Market - $40+ Trillion

There is an insatiable demand for credit globally and especially in the developing world. For example, Kiva has generated over $1 billion in loans to millions of people in over 80 countries. The Wall Street Journal noted China recently reached a milestone in matching the U.S. and EU in consumer debt to income ratios of 234%. This portends growing demand for credit as other developing countries catch up to the middle-class growth that China has

Prepaid Minutes Market: $650B+

The Telecom industry association, GSMA, estimates that consumers spend over $650 billion yearly on prepaid minutes. The average user consumes approximately $10 of prepaid time monthly or $120 annually.

Global Value Transfer: $600B+

The World Bank estimates that $615 billion will be transferred person-to-person globally across national borders this year.

Demand for Cryptocurrencies: $400B+

Currently, there is approximately $400 billion of market value in cryptocurrencies, according to Coinmarketcap.com. Bitcoin accounts for the largest percentage at over $130 Billion.

BANKING THE UNBANKED

Financial inclusion is a key driver in tackling poverty and boosting economic growth. Yet a staggering two billion adults across the world still do not regularly use a bank account or have access to a financial institution via a mobile device. Here is the latest data on financial inclusion, which shows a large disparity between different countries worldwide

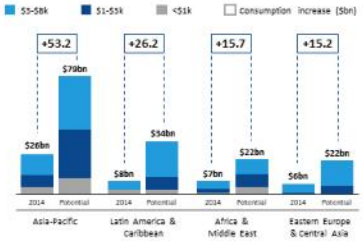
WHERE THE UNBANKED LIVE

PERCENTAGE OF PEOPLE AGED 15 AND OVER WITH AN ACCOUNT AT A FINANCIAL INSTITUTION

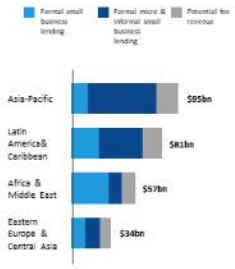
$380BN OPPORTUNITY FOR BANKS IN EMERGING MARKETS

Estimated financial services consumption increase through full banking penetration and increased utilization by adult population

PERSONAL BANKING
Income band of adults (per annum)



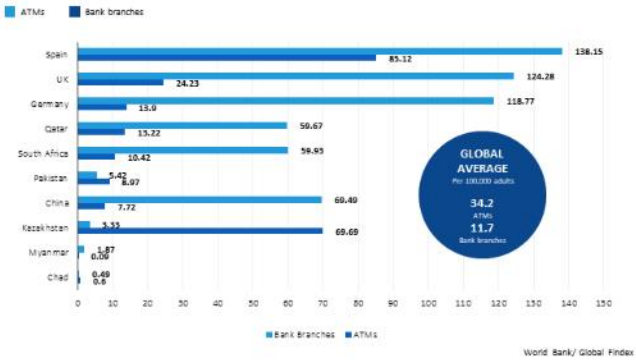
MICRO AND SMALL BUSINESS BANKING



Accenture/World Bank/ Global Findex

COMMERICAL BANK BRANCHES AND ATMs PER 100,000 ADULTS

MOST PERCENT DATA AVAILABLE FOR SELECTED COUNTRIES



World Bank/ Global Findex

BANKED PERCENTAGE OF POPULATION

TOP AND BOTTOM TEN FROM MORE THAN 160 COUNTRIES WITH AVAILABLE DATA

TOP 10

01 Norway	100%
02 Finland	100%
03 Denmark	100%
04 Sweden	99.7%
05 New Zealand	99.5%
06 Netherlands	99.3%
07 Canada	99.1%
08 UK	98.9%
09 Australia	98.8%
10 Germany	98.7%

BOTTOM 10

01 Turkmenistan	1.8%
02 Niger	3.5%
03 Madagascar	5.7%
04 Guinea	6.2%
05 Republic of Yemen	6.5%
06 Burundi	6.9%
07 Chad	7.7%
08 Somalia	7.9%
09 Pakistan	8.7%
10 Afghanistan	9.9%

Global Findex, World Bank

Use of Proceeds

BitMinutes is selling a maximum or “Hard Cap” of $30M. We estimate the Use of Proceeds to net approximately $27M after deducting advisory fees, broker commissions and marketing costs. We offer low-cost loans through third-party lenders to fund consumer loans to the unbanked; consequently, lending capital is the single largest use of funds. Using that target amount, the budget breaks down into the following.

Lending Capital - 67%

With an initial $18M in lending capital, third parties will be able to offer loans as small as $5 to millions of consumers. The average loan amount may be higher, but we want to be prepared by allocating the bulk of the money raised to be available to support third party lending.

Marketing - 22%

Marketing, the second largest budget item, will be primarily spent on developing consumer awareness of the products offered by our third-party developers and distribution partners. This will entail a combination of social marketing including digital media where appropriate, plus retail banners and flyers to support the Trusted Agent Network brand and co-branded retail partners.

Operations - 9%

Operations include salaries of the BitMinutes team and the costs of setting up operations in foreign countries. BMT development is complete and securely hosted in the Amazon Cloud, reducing implementation costs. Having in-country partners and contracts for disbursements to 70 countries reduces the need for setting up foreign offices.

Treasury/Overhead - 2%

The Company will retain a small amount of capital in Treasury to accommodate unforeseen issues and to increase lending capital if necessary.

Token Ownership Allocation

During Pre-ICO and ICO, 6.8 billion BMTs were issued with approximately 50% available post ICO audit. All Pre-ICO tokens were subject to a 30-day holding period post-ICO audit. This included several categories: bonuses paid to ICO marketing partners at 10% with 90-day trading restrictions; BMT management team incentives at 15%, held in escrow and released upon hitting performance milestones; 20% issued for lending collateral (not traded); 5% for Prepaid Minutes redemption (not traded). This initial BMT issuance is the only BMTs available for trading. Consequently, BMT market capitalization, valued at the ICO price of $.02, is $68 million.

The remaining BMT will be held in Treasury to accommodate future BitMinutes loan demand, Prepaid Minutes conversion, potential Mobile Mining fulfillment and administration thereof. The total amount of BMTs authorized for issuance, verifiable on the Ethereum Network, is 100 billion. This represents the maximum amount of BMT that can ever be issued by the Company to meet the above demand as necessary. This emulates the Ripple model, but with more extensive use cases.

Smart Token Technology

Smart Token Technology Powers BitMinutes

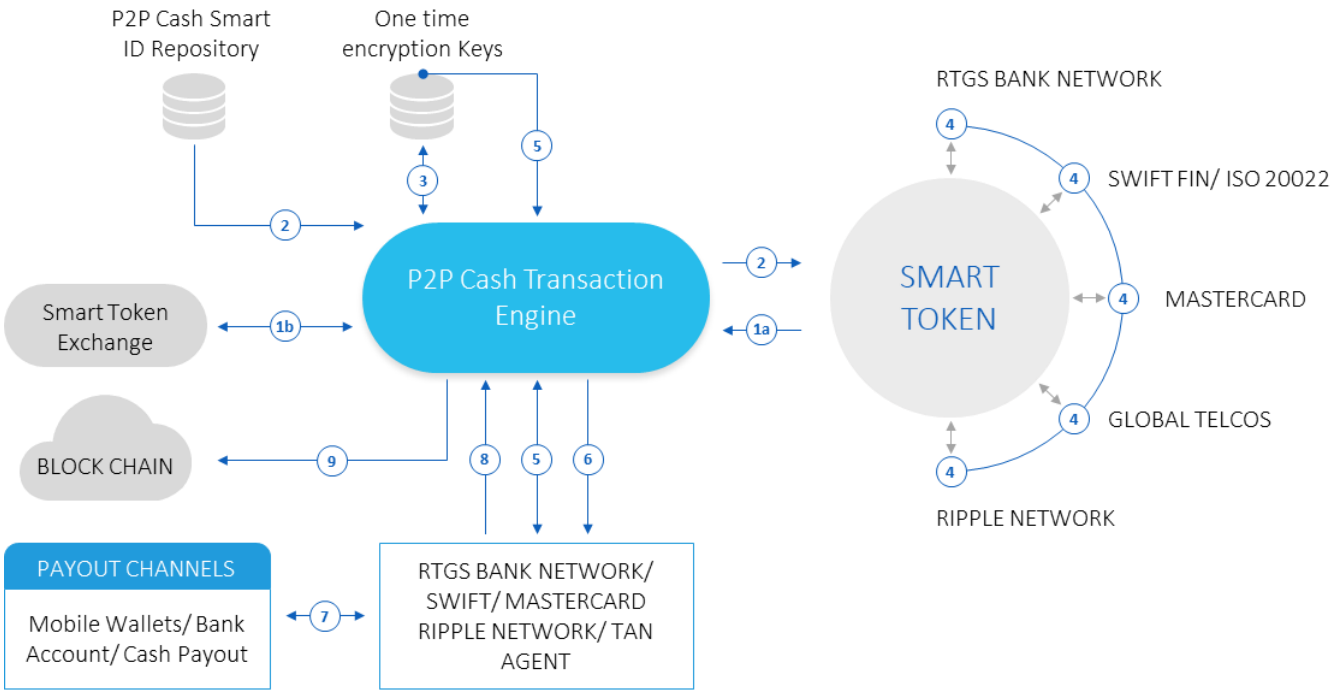
BitMinutes are based on proprietary Smart Token technology operated over both traditional (SWIFT, MasterCard) and blockchain networks (Ethereum, Ripple). The BMTs issued to senders are customized with the sender's unique identifier (UID) to prevent fraud and money laundering. Unique BMTs are issued and sent to the recipient's mobile wallet in a text message, email and/or via smartphone app.

BMTs provide auditability and government monitoring. BitMinutes, when used in lending, transferred into cash or leveraged for prepaid airtime, meet and/or exceed international payment security and AML standards. Smart Tokens accomplish KYC requirements through a ISO 20022 standardized format of retrieving and storing identity information of financial transaction participants.

Based in ISO standards, BMTs have additional data fields to add biometric information and smart contract business logic. This allows BMT usage to be restricted based upon any number of variables, for example: country of redemption, the recipient's carrier and/or the mWallet configuration.

Figure 1- Smart Token Architecture Overview

Built originally to comply with traditional settlement networks, BMTs are "The Bridge" between the traditional settlement world and the new, emerging blockchain world, starting with Ripple and now Ethereum.



Smart Token Chain developed Smart Token technology as the core to its payments engine, switching capabilities and identity management. Therefore, Smart Tokens are the underlying technology driving the remittance platform for BMTs and providing interoperability between global settlement networks. Through the use of Smart Tokens, value can be exchanged across public ledgers while keeping the transaction information private between sender and receiver. In addition to interoperability between Ripple and Ethereum, Smart Tokens integrate with existing traditional global settlement networks like SWIFT and MasterCard's HomeSend.

Smart Token technology combines smart contracts, tokenization and blockchain to unify financial services, establishing a common global standard for extending credit and exchanging value, based on global banking standard ISO 20022. By leveraging Smart Token technology, BMTs create mobile banking interoperability for telco carriers much like Ripple's XRP Tokens created interoperability between banks. For more technical details and flowcharts, please refer to Appendix C.

Operations

Currently, the Smart Token technology behind BMTs facilitates cross-border money transfers across the global P2P Cash money transfer network, and specifically is operational settling U.S. to Mexico foreign exchange transactions. Every transaction settles in real time with an immutable copy of the entire transaction. Additionally, P2P Cash has been operational for over three years through a joint venture with the largest retail bank in Africa, Equity Bank. The global P2P Cash ecosystem is available to promote and distribute BitMinutes.

Guaranteed Smart Loans

The BitMinutes platform is integrated in to the world's leading microfinance platform MIFOS (www.MIFOS.org), developed by Grameen Bank used by the majority of microfinance NGOs operating globally.

Client Service Operations

Client Service Center

The BMT Client Service Center is available 9am - 9pm EST. As we strive to meet the needs of our clients, we understand it is vital to communicate in their native language wherever they are around the world. Client Account Representatives are fluent in English and Spanish while Hindi, Korean, Swahili, Portuguese, and Tagalog are planned for the future of our Client Service Center.

Client Service Support

Clients needing assistance outside our Client Service Center regular business hours of 9am - 9pm EST that do not require immediate assistance are encouraged to send email messages to support@bitminutes.com. Inquiries are handled within 24 business hours.

Client Service Chat

Clients who need immediate assistance are encouraged to chat with live agents in English on our site 24 hours a day. Live agents are available to assist with questions and provide assistance with activities related to creating their wallet, account access, the purchase of BMTs or general account information.

Client Escalations

All client escalated issues should be sent to max@bitminutes.com for immediate attention and resolution.

Company Leadership

Management Team

Thomas Meredith - Chairman and Chief Executive Officer

Mr. Meredith has significant internet, financial services and telecommunications experience. He started his computer career with Digital Equipment Corporation when the first 32-bit architecture was introduced. He was a part of the original team at Franklin Computers, the first Apple clone manufacturer, and managed over 800 retailers in 11 western U.S. states. Additionally, he was the Federal Systems Director for Lisp Machine, a leading artificial intelligence company.

Mr. Meredith founded VoxLink and led the company for seven years to become a leading innovator for voicemail and email integration. He founded one of the first online gaming companies, Internet Gaming, which was responsible for processing the first significant volume of credit cards internationally on the Internet. Additionally, Mr. Meredith has years of experience consulting the financial services industry, primarily in automation of mortgage and credit/debit card processing.

Mr. Meredith is a graduate of the Harvard Business School, specializing in Entrepreneurial Studies, and Stanford University where he received an Engineering degree in three years on an Academic Scholarship. He has a working knowledge of French and Spanish.

Paddy Atmuri - Chief Financial Officer

Mr. Atmuri has been in leadership roles in finance transformation with Fortune 100 corporations like, 3M, Cargill, Coca-Cola and midsize firms including EMC, Benjamin Moore and AMG funds. He was instrumental in several startups, including Atlanta-based Embassy National Bank, a nationally chartered bank. He also participated in the Accenture New Products initiative. He is a licensed CPA and holds an MBA from CSU.

Morris Mwanga - Chief Technology Officer

Prior to pursuing an advanced degree in Computer Science, Mr. Mwanga developed financial exchange and mobile wallet technology in Sub-Saharan Africa. During this period, Mr. Mwanga acquired extensive banking integration expertise, complementing his previous experience with mobile communications technology. He led the entire BitMinutes development effort overseeing both the programming staff and all outsourced integration activities.

In addition to his mobile wallet development management expertise, Mr. Mwanga has over 12 years in direct programming experience. He holds a bachelor's degree in computer engineering and a master's degree in computer science. Mr. Mwanga is also a Certified Information Systems Security Professional (CISSP).

Kern Lewis - Head of Marketing

Mr. Lewis is a veteran marketing professional with 25 years of experience in financial services. Prior to joining P2P, he spent eight years directing marketing programs for World Savings and CMG Mortgage. At World Savings, he led efforts that doubled customer retention rates during the refinancing boom. At CMG he directed the introduction of the Home Ownership Accelerator loan product. To support the product launch, he led recruitment efforts that attracted and trained over 10,000 loan agents in a two-year period.

Mr. Lewis began his career with American Express in their merchant services division, tasked with deepening merchant acceptance by attracting new merchants and developing programs to retain and expand existing merchant relationships. He left AmEx to manage credit card marketing for Great Western Bank before dedicating two years to serve as a business educator and small business advisor in Ukraine and Albania with the United States Peace Corps. Mr. Lewis earned an MBA from Harvard Graduate School of Business and a BA in Economics from Stanford University.

Peter Carruthers - Head of Compliance, Banking Operations & FX

Mr. Carruthers' career spans 25 years of advising Fortune 500 and institutional clients on foreign exchange (FX) risk management. He focuses on providing highly effective, innovative FX solutions to long-term clients. Mr. Carruthers practiced FX advisory for 15 years at Citibank, the last six years as Director of Capital Markets. He also worked at Credit Suisse/First Boston, Bank of Nova Scotia and Royal Bank of Scotland.

Mr. Carruthers received his Bachelor of Science in Finance and a minor in Accounting at Manhattan College, and received his MBA from Fordham University. He has held NFA Series 3, and FINRA series 7 and 63 designations. He is an active member of the board of directors and finance team of an international charitable foundation.

Donald Chapman - Head of Global Business Development

Mr. Chapman is a financial services technology and payments professional with over 15 years of professional experience in technology deployments and business development. Prior to joining P2P he helped establish and launch a real-time, global payments network (PayNet) for Fidelity National Information Services (FIS). He also spent eight years in corporate consulting, working with clients like Prudential Financial, Discovery Communications, Wyeth Pharmaceuticals and Ocean Spray Cranberries.

Mr. Chapman graduated from Providence College where he was a NCAA Division 1 lacrosse player and member of the Dean's List. He earned his MBA with an Investments Concentration from Babson College's Olin School of Business.

Amadeo Radillo - Director, Latin America

Mr. Radillo is an experienced bilingual (English, Spanish and Portuguese) and bi-cultural senior financial and payments executive with over 25 years in the FinTech and financial services industry. Prior to BitMinutes, Mr. Radillo was the Chief Executive Officer of the Financial Services Group at the World Council of Credit Unions (WOCCU Services Group) in Madison, WI/Washington, DC. While acting as the CEO of WOCCU Services Group,

Amadeo developed and maintained the corporate objective to expand World Council mobile financial services footprint for credit unions worldwide through online and digital innovation and product development with a focus on payments switches, issuing cards and mobile solutions. Mr. Radillo developed new and improved customer relationships in Ecuador, Mexico, Peru, Bolivia, Colombia, Costa Rica, Guatemala, Paraguay, Panama and Dominican Republic.

Before joining WOCCU Services Group, Mr. Radillo served as Corporate Finance Manager and Latin America Product General Manager for Vesta Corporation. While at Vesta, Mr. Radillo developed and implemented payment platforms, technical infrastructure, pricing and financial models for the mobile business; provided international finance, best practice operation business guidance on a case-by-case basis; and enriched the banking and commercial relations with in the Latin America financial industry.

Juan Soto - Director, Trusted Agent Network (TAN) & Merchant Relations

Mr. Soto is a senior payment industry veteran; his entire career spent in the point-of-sale, transaction processing and merchant acquiring marketplace. Most recently, Juan founded Tesoro Payment Solutions, a merchant services and consulting practice that targets the Hispanic and underbanked markets in the U.S.

Juan has held senior sales management and business development positions in different industry verticals including stints at Fleetcor (fleet card issuer & processor), Planet Payment (dynamic currency conversion processor), Noblett & Associates (payment technology consultancy), Chase Merchant Services & NaBANCO (credit card merchant acquiring), and IVI Checkmate/Ingenico (POS equipment manufacturer).

Juan holds a B.A. in Business Administration from Florida International University in Miami, Florida where he majored in Finance and Marketing. He also holds technical and pre-engineering associate degrees and is fluent in Spanish.

Maxine Alagar - Director, Customer Service and Merchant Support

Maxine brings to BitMinutes 25 years of customer service in the telephony industry. Most recently, Maxine was Director of Operations at Global Connection, responsible for the national Call Center, including 86 Customer Service Representatives, network operations and human resources, responsible for hiring, training, and termination of call center personnel. Previously, Maxine spent 25 years at BellSouth with her last job title as Operations Director of Billing and Collections. Maxine works closely with the BitMinutes marketing team to deliver material and training to retail agents and internal service representatives.

Dennis Goodenough - Director, Product & Platforms

Mr. Goodenough has over 30 years of experience in Financial Services. He spent 11 years at SWIFT, the financial messaging cooperative, responsible for large account management, business development, partner management, communications and regulatory relations. Dennis spent 5 years at the DTCC, the U.S. market's central securities depository, resolving STP issues, reference data, and the move to T+3 settlement cycle. During an11-year tenure at American Express, he held positions of increasing responsibility in finance, operations and marketing.

Dennis remains active with a number of U.S.-based industry organizations including ISITC, SIFMA and the Asset Managers Forum. Dennis holds an MBA in finance/marketing from New York University's Stern School of Business and a BA from Hobart College.

Advisory Board

Leonard H. Schrank

Leonard Schrank was CEO of SWIFT from 1992 to 2007, the Brussels-based, industry-owned global financial messaging system which supplies secure standardized financial messaging services and interface software to some 8,000 financial institutions in 200 countries. SWIFT is overseen by a senior committee drawn from the G-10 central banks given its critical role in international payments. Following the attacks of September 11, 2001, Mr. Schrank oversaw the relationship between the U.S. Department of the Treasury and other countries on counter-terrorism issues. Mr. Schrank, an MIT graduate, currently serves on a number of international boards, including HSBC.

Brian W. Smith

Mr. Smith has a 42-year involvement in the financial services industry. His roles have included SVP General Counsel and Corporate Secretary of Mastercard International where he was a member of the Office of the President; as Chief Counsel and Member of the Policy Group of the Office of the Comptroller of the Currency and as a senior partner in several multinational law firms – most recently Latham & Watkins, LLP - where he headed those firms' financial regulatory practices. He is a member of the boards of directors of several companies and of a charitable foundation.

Consultants

Jay Postma - Money Transfer Compliance

As founder and President of MSB Compliance, Inc., Jay has extensive experience in providing money transfer compliance advice, most recently with the Federal Reserve Board in Atlanta. He is advising BitMinutes regarding acquiring money transfer licenses in required geographies and Financial Crimes Enforcement Network (FinCEN) approval at the Federal level in the U.S.

In-Country BitMinutes Support

B.M. Khanna - India

Mr. B.M. Khanna has vast experience in the telecom field serving the Indian Government's Department of Telecom (DOT) for over 40 years, holding several key positions.

Mr. Khanna's most recent position was as Chairman & Managing Director of Mahanagar Telephone Nigam Ltd. (MTNL), a public telecom company, serving two of the largest cities in India, Delhi and Mumbai. During his tenure as CEO of MTNL for over seven years, MTNL was recognized as amongst the five most efficiently managed Public-Sector Undertakings in India.

Previously, Mr. Khanna was the CEO of Indian Telephone Industries (ITI) at Allahabad and Deputy Director General responsible for the formulation and implementation of the long-term planning for Indian Telecommunications at Telecom Headquarters. He was the senior expert with the ITU at Addis Ababa for the implementation of PANAFTEL SYSTEM for the Africa Region. Prior to that, he was Director Long Distance at Telecom Headquarters. He also was Director, Microwave Projects at Mumbai responsible for installing new systems in the Western Region of India from scratch.

Mr. Khanna has consulted several multinational corporations including: AT&T, NCR, Lucent Technologies, Arraycom, Hughes Network Systems, HCL Infosystems, American Tower Corporation and CH2M Hill. As a senior member of the telecom fraternity in India, Mr. Khanna has been associated with the Confederation of Indian Industries (CII) and Fellow of the Institution of Electronics and Telecom Engineers at the key policy planning level. As a member of the CII's National Telecom Council, he has been intimately involved in several key telecom policy initiatives taken by the CII, as well as the regulatory issues affecting the Telecom Industry in India.

Peter Pang - China

Mr. Pang is the founder and Principal Attorney of IPO PANG P.C., an international law firm with substantial expertise in intellectual property, corporate law and international joint ventures.

He was formerly general corporate counsel to several Fortune 500 companies, including Shell Oil Company, Hershey Foods Corporation, Dole Food Company, and Nissan North America. Mr. Pang specialized in protecting famous American brands from piracy and counterfeiting, especially in the People's Republic of China (PRC). He also has M&A experience, having participated in over $5 billion of such transactions.

Mr. Pang was the founder and CEO of Globalontime.com, a logistics startup company with operations in Guangzhou, PRC, and was also the former Director of International Shopping Network, Inc., a home shopping company with operations in Beijing, the first foreign company to introduce home shopping to PRC in 1994. Mr. Pang was formerly President of CMC Technologies International, Inc., an electronics device manufacturer and oversaw the sale of the company to Australian bidders. Mr. Pang has expertise in conducting business in PRC, including the legal and economic effect of China's entry into the World Trade Organization (WTO), and a businessman having founded, operated and sold a number of businesses ranging from internet companies to manufacturing facilities located in the PRC.

Mr. Pang speaks both Cantonese and Mandarin Chinese. Mr. Pang is a graduate of UC Berkeley in Biochemistry, Santa Clara Law School, where he was a member of the law review, University of Houston with a LLM in International Economic Law, and attended the Fuqua School of Business at Duke University and studied law and economics in China and Hong Kong.

Appendices

Appendix A: Why BitMinutes is the solution to accessing prepaid phone minutes through the blockchain.

The following details the advantages BitMinutes have over Bitcoin. (Including Third Party Apps)

Product Attribute	BitMinutes	Bitcoin
Inherent Value - Call Globally	Yes	No
3rd Party mWallet Transfers	Yes	No
Identity Verification Required	Yes	No
Multi-Country Agent Network	Yes	No
Payment to ALL Major Telecom Carriers	Yes	No
Anti-Money Laundering Built in	Yes	No
Secure Bank Transfers	Yes	No
Free International Money Transfer	Yes	No | ~1% Fees

The BitMinutes Opportunity

As a result of the Internet, several multi-billion dollar companies were created by leveraging the power of direct, secure communication between individuals, thus disintermediating established industries. Skype and PayPal both aggregated large customer bases by offering free services in international calling and payment processing, respectively.

Leveraging these same large, scalable Internet-centric attributes, BitMinutes enables third-party developers to offer business models with significant advantages over Bitcoin: ***Lending Capabilities, Inherent Value, Price Stability*** and ***AML*** attributes.

Bitcoin Disadvantages

As a “free” form of P2P money transfer, Bitcoin is gaining traction in disintermediating the money transfer industry by allowing monetary value to be exchanged for “free” between individuals. However, as a currency for the global underbanked, Bitcoin has several major flaws including: lack of transparent user identity making it the currency of choice for global illicit activities; lack of local liquidity significantly reduces Bitcoin’s ability to act as a money transfer vehicle; and extensive energy requirements for processing. For instance, in the money transfer market (i.e. $28 billion from U.S. to Mexico), there is only one Bitcoin exchange for the entire country, Bitso.

BitMinutes Advantages

Using Smart Token technology, BitMinutes solves all of the well-known Bitcoin issues:

Local Currency Support in Underbanked Countries

Bitcoin lacks convertibility to physical cash especially in underbanked countries. BitMinutes provides convertibility into over 100 country currencies via its prepaid minutes conversion capability.

TAN Agent Network Provides True Cash Liquidity

Converting physical cash into and out of a virtual currency requires a network of trusted Agents. The third- party Trusted Agent Network (TAN) solves this problem, while concurrently providing a business opportunity to the very same target market that benefit from a virtual currency like BitMinutes.

BitMinutes: Inherent Value - Call Globally

BMTs have inherent value for two reasons: 1) BMTs can to be used to call any phone globally, and 2) BMTs can be sent to any phone globally as credit to pay for minutes for use in that country. This applies to any cell phone in over 100 countries.

BitMinutes Anti-Money Laundering

BitMinutes have a major advantage over Bitcoin in conducting legitimate business. All BitMinutes transactions are either centrally and/or blockchain approved and recorded on any designated payment network, thereby providing an audit trail. Plus, any BitMinutes user must have a bank account and/or mobile wallet that meets international AML standards. The anonymous nature of Bitcoin does not permit this level of auditability and does not meet international AML standards, thus making it an unlikely candidate as a widely used international currency to settle banking transactions.

Appendix B: BitMinutes Smart Loan Lending Process

The Smart Loan amount a consumer qualifies for is determined by a proprietary analytics including social media analysis in addition to the above parameters.

Wallet holders who maintain BitMinutes balances in their wallet can use a portion of these balances as funding for Smart Loans. TAN agents are the marketing and operational distribution network to issue mobile wallets, issue cash and accept cash repayments. TAN Agents receive a portion of the interest and repayment of principal once the Smart Loan has matured. In this model, the TAN Agent owns BMTs as well, demonstrating they have "skin in the game" which helps lower default rates.

Because the credit of these borrowers may be quite low and the risk of default high, microloans command above market interest rates, making them enticing for investors.

The TAN Score

BitMinutes uses a TAN score along with other details in the borrower's transaction history to assess the credit risk of the borrower. The TAN score is on a 0–1000 scale. A score of 0 is very low and hence high risk, whereas a high score of 1000 has low risk. There are several factors that go into a TAN score. The factors that go into the TAN score are weighted differently, including:

- Repayment history
- Current loans owed
- Age of account
- Income
- Inbound and outbound remittances
- Mobile airtime top up and usage
- Smartphone location services

The Loan Decision Process

Using an internal network in the BitMinutes loan decision-making process enables fast processing of microloans with no human intervention. The lending engine assesses the credit risk before a loan is issued and during the repayment process, which creates quality feedback data for the lending engine. The continuous underwriting process takes in real-time data, such as the smartphone airtime usage, location services and incoming remittances.

The lending engine also checks for fraud during decision-making processing by correlating several data points during an application process.

The neural network evaluates several factors to determine the credit worthiness of the borrower and the factors are evaluated while considering similar microloan applications. The neural network is key to loan pricing, an important factor while determining credit risk.

The neural network in the BitMinutes lending engine is a back-propagating, multi-layer, feed-forward neural network. Previous and current loans are used as the training data sets. The input variables include individual components of the TAN score; collateral offered, guarantors, social factors that might affect repayment and any other data collected from the borrower.

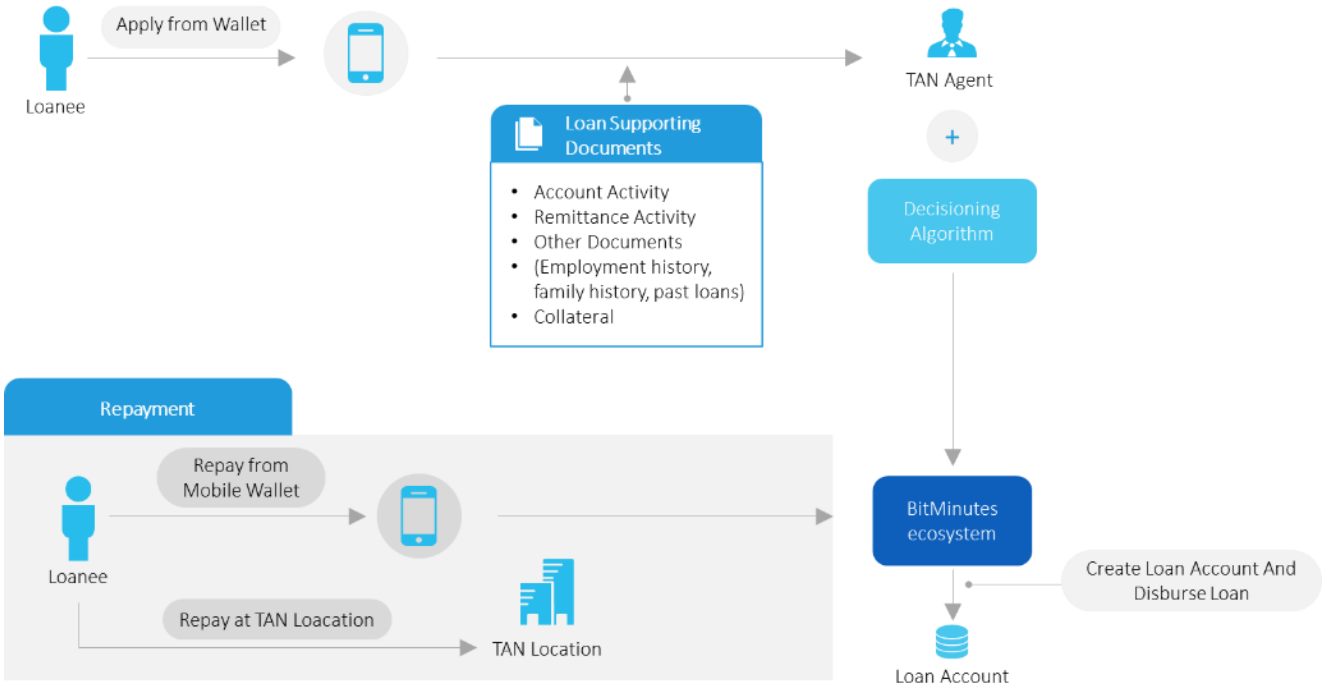


Figure 2: Micro lending workflow

BitMinutes Smart Loan Rates

The repayment of interest for all loans is auto-calculated based on the overall performance of the BitMinutes Smart Loan platform. Depending on where the loan is underwritten, adjustments are made for: inflation, risk profile and local factors, such as competition from other lenders.

The TAN Agents in the BitMinutes ecosystem borrow cash from BitMinutes Inc. using BitMinutes as collateral. TAN Agents pay approximately 0.5% per week or a non-compounded annualized rate of 26%. They in turn offer Smart Loans directly to the consumer and to other TAN Agents ranging from 0.6% to 1.0% per week; non-compounded annual rates of 31% to 52% respectively. These interest rates will vary from country to country, with the consumer rates largely determined by the TAN Network and regulatory guidelines.

Eligibility for a Smart Loan

Only BitMinutes wallet holders are eligible for Smart Loans. This encourages BitMinutes wallet adoption. The loan amount qualified for depends on several factors, including: repayment history, balances held in BitMinutes, remittance volume and frequency. These factors are combined into a proprietary scoring model and issued as a TAN Score, ranging from 0 to 100 ranking each potential user's credit limit within that range.

TAN Credit Scoring

Lenders use subjective scoring, the use of defined parameters, such as experience in the business, net margin of the business, and profitability and disposable income to analyze businesses and credit risk. These parameters are defined using industry standards, institutional experience and stated lending policies. A number of qualitative indicators are also used as selection criteria.

BitMinutes uses statistical credit scoring forecasts, risk-based on quantified characteristics, recorded in a database. The relationship between risk and client characteristics is expressed as sets of rules in a mathematical formula that forecasts risk as a probability (Schreiner, June 2002). For example, statistical scoring can determine that a seamstress who is renewing a loan has a 12% likelihood of defaulting, or that a male, first-time loan applicant who owns a furniture factory has a 22% likelihood of defaulting. Statistical scoring not only tells if the client is risky or not, it also provides an exact measure of the predicted risk.

Today, scoring is widely used by credit card companies that use credit histories and other borrower characteristics to automatically approve credit lines without personal contact with applicants. Subjective Scoring forecasts risk based on the quantified knowledge and the qualitative knowledge of the characteristics of the client and the loan contract.

A majority of wallet holders in the BitMinutes micro-lending platform do not have this kind of data available. However, there exists other readily available data including remittance volumes either sent or received and the frequency thereof, plus the wallet holder's transaction activity. BitMinutes associate company, P2P Cash, currently partners with multiple vendors like Socure for identity verification and fraud prevention. BitMinutes uses a similar international authentication and social media analysis companies to base the TAN credit score system on these parameters. In addition, whenever the statistical and subjective data is available, that data is used in the credit scoring process.

Smart Loan Underwriting Process

The wallet holder applies for a loan within the BitMinutes mobile app. BitMinutes analyzes the loan request and gives it a TAN score for proprietary analytics. The Smart Loan package is immediately underwritten by the Smart Loan Underwriting engine with the particular loan details included in an encrypted Smart Token. These details include: the loan principal, repayment period, the repayment history, the derived TAN score of the prospective borrower and the calculated interest rate.

Habitual borrowers who pay their debts on time will establish a better personal TAN Score. Consumers with a higher TAN Score will generate Smart Loans with a higher Smart Loan TAN ranking of the individual loan itself.

Loan Repayment - Smart Loan Technology

Once a Smart Loan is disbursed with mutually agreed upon terms between the lender and borrower, a repayment schedule is created as a Smart Contract regarding that specific BitMinutes loan. The repayments are made with the BitMinutes wallet. Even if the loan is sold in the secondary market, the repayment schedule is unaffected because that particular BitMinutes Smart Loan is governed by the underlying Smart Contract on Ethereum.

Lenders are guaranteed repayment of 50% of the principal amount by BitMinutes held in escrow by the TAN Agent. TAN Agent credit lines are determined by their individual TAN Score. Both the consumer and retailer need to repay their loans in BitMinutes. This generates consumer awareness and use of BitMinutes, keeping the local market liquid in that particular currency.

Appendix C: BitMinutes FinTech Ecosystem

BitMinutes parent company, P2P Cash, developed several technologies and business models as part of a "FinTech Ecosystem" bringing disruptive, low-cost financial services to the developing world. The following companies provide the global infrastructure for BitMinutes, significantly enhancing its potential for global success.

Trusted Agent Network (TAN)

To assist in BMTs distribution, P2P created TAN and associated mobile applications for both consumers and agents. TAN creates a business opportunity for the two billion underbanked individuals to become what the World Bank describes as a "Branchless Banking" network of trusted agents. The TAN network provides substantial job creation opportunities and easy access to financial services, replicable on a global basis.

P2P Cash Technology

P2P Cash Technology, Inc. is the operator of a money transfer platform using BMTs as the underlying value transfer technology. P2P's consumer marketing efforts focus on the top five global U.S. money transfer markets: China, India, Philippines, Mexico and Vietnam. P2P Cash promotes its Send Cash Home Free! Program via a digital marketing campaign. P2P only accepts funding directly from the consumer with a bank account in the U.S., eliminating significant costs of brick and mortar operations. P2P generates revenue from the currency exchange rate only because it does not charge a transaction fee. Net revenue by way of FX margin averages about 1% of the amount transferred after distribution costs. Via integration with Mastercard's global distribution network, BMT can be directly deposited into 2+ billion mWallets and bank accounts.

Free Mobile Wallet

P2P Cash has developed a free mobile wallet to facilitate delivery of cash, providing an end to end solution.

P2P has incorporated an industry leading identity system app to capture an identity and perform a KYC background check in over 200 countries. P2P's platform is mobile wallet agnostic and is currently compatible with many major telecom mWallets, including, but not limited to: M-Pesa (Kenya), Orange Telecom (France/Africa), Bharti Airtel (India/Africa) and Globe and Smart (Philippines, SE Asia).

Mastercard Integration

BitMinutes is currently integrated with Mastercard's global distribution network. This permits BitMinutes to be automatically converted by Mastercard into cash and directly deposited into over 1.2+ Billion bank accounts and mWallets via HomeSend.

Banking

BitMinutes leverages both its traditional bank relationships along with its use of cryptocurrencies and blockchain technology in order to transfer currency cheaply and efficiently. The P2P Cash group of companies currently uses large international banks in its daily business dealings along with Bitcoin, Ether and XRP (and the Ripple DLT) to transact daily business. BitMinutes has introduced BitMinutes (BMT) in its daily business of remittance and lending.

Appendix D: Technology Details

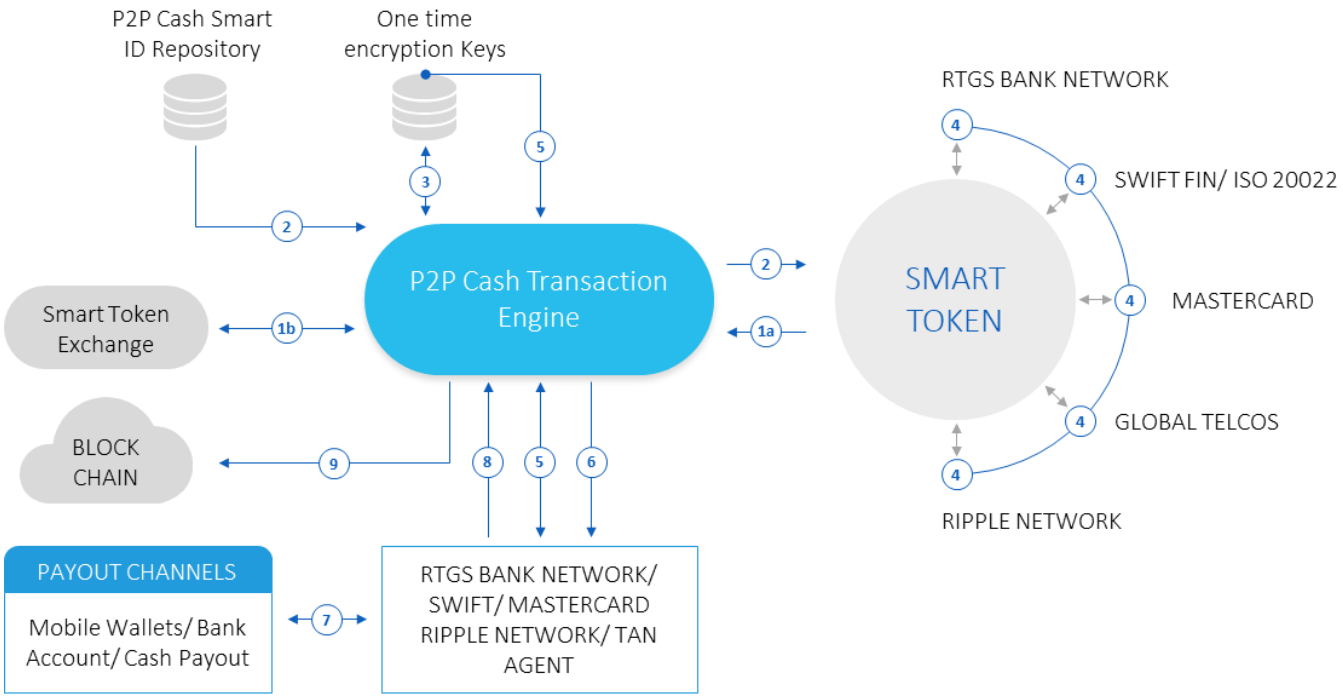


Figure 3: Smart Token Architecture Overview

- Step 1-a: Smart Token holder wants to convert BitMinutes to either currency or prepaid minutes.
- Step 1-b: Smart Token Exchange provides a real-time exchange rate to convert BMTs to currency or prepaid minutes.
- Step 2: Smart Token holder accepts BitMinutes conversion rate. Transaction details are encrypted into a Smart Token. The Smart Token creation process ingests native ISO 20022 XML messages, SWIFT FIN instructions, and MasterCard HomeSend API commands and creates a Smart Token compatible with each respective network. The sender and recipient's KYC information is retrieved and embedded into the Smart Token as a separate Smart ID token.
- Step 3: The transaction payload and previously generated Smart Token are encrypted and combined with the ID Token, creating a Master Token with a one-time encryption key.
- Step 4: Transaction posted to the payout network.
- Step 5: The payout network retrieves the matching one-time decryption key and decrypts the payload.

- Step 6: The payout partner unpacks the payload and delivers the transaction to the receiver. Bank account, mobile wallet, TAN Agent cash payout.
- Step 7 and 8: Settlement and acknowledgment of funds delivery.
- Step 9: Settlement and post transaction information is encrypted, and the Master Token is updated with this information. The Master Token is written in an immutable manner to any desired blockchain. Currently Ripple and Ethereum are supported.

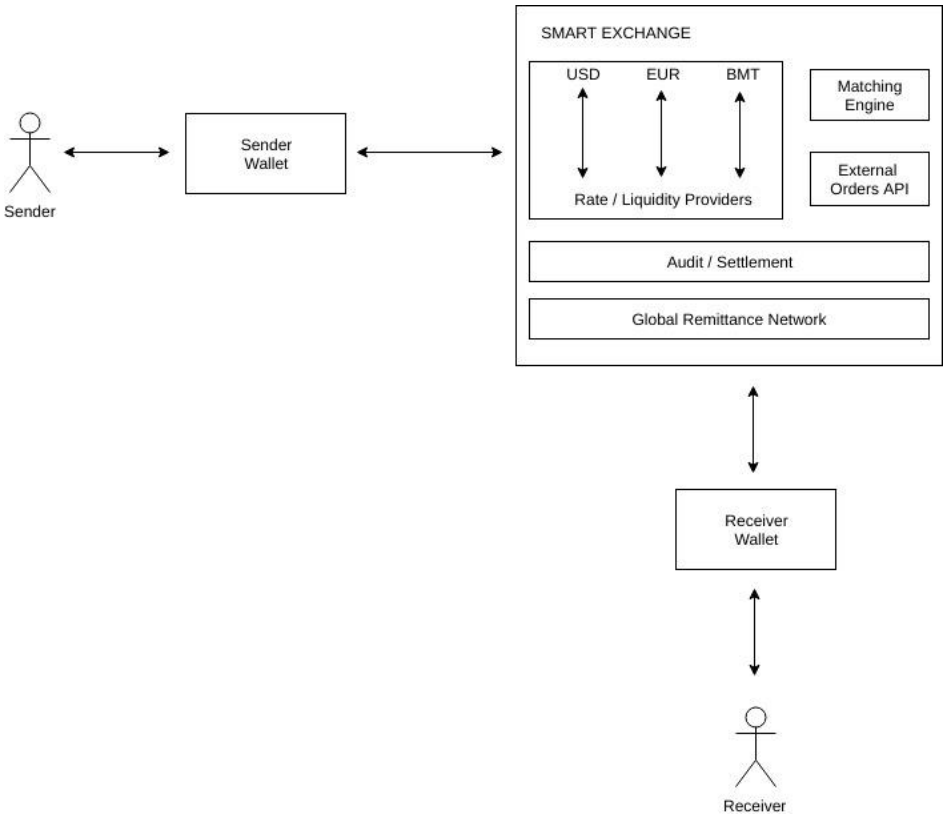


Figure 4: Smart Token Exchange Architecture

Global Identity Management

Smart Tokens meet KYC requirements through a standardized format of retrieving and storing Identity information of financial transaction participants. The standard is ISO 20022 RemittanceAdviceV02 Msg ID remt.001.001.02.

The Smart ID Token KYC architecture and data organization is based on the globaliD white paper *https://www.globalid.net/wp-content/uploads/The-global-iD-Whitepaper.pdf*

GlobaliD relies on the user's cellphone to act as the physical token to prove identity. A summary of this approach is outlined in the below excerpt from the globaliD White Paper:

> *"globaliD anticipates every named user having a mobile phone that acts as a physical token for their identity (i.e. something that they have rather than a password that they know). Therefore, one's phone (the combination of one's phone number, SIM card, and specific device) is connected to the globaliD of the individual who has that device. The expectation is the device is present, with an encrypted private key, and is bound to the biometric/pin which ensures that it can be used only with the authorization of its true globaliD holder. Attestations about the holder include confirmation by the carrier as to the identity of user, as well as the personal contact lists of other globaliD holders who have a particular user (and that user's phone number) in their own private address books.*
>
> *globaliD introduces an important constraint that significantly increases the privacy/security/trust of its ecosystem: any globaliD name can only be associated with one-and-only-one phone (number/SIM card/device) at a time. Thus, one cannot associate their globaliD with multiple devices – meaning that there is always only a single token of one's Global ID active in the ecosystem at any point in time."*

Smart Tokens extend the ISO 20022 remt.001.001.02 message format to include additional proprietary identity information in the globaliD format to include seven added data points.

USD to MXN example:

- Name verification
- Date of birth verification
- Address verification
- Social Security Number verification
- Mexican Matricula ID
- Bio-metric verification
- Supplementary data verification—including phone number, email address, social media accounts

The name, date of birth, address and social security number includes the U.S. government's Office of Foreign Asset Control (OFAC) checks on individuals and corporations to determine they are not on any restricted lists.

All of this data is combined into a unique KYC matrix scoring system. This information also contributes to the Trusted Agent or TAN Score. Sample code below:

```
<?xml version="1.0" encoding="UTF-8"?>

<?P2PCash to Bitso Test Message?>

<Document

        xmlns:xsi="http://Mastercard.w3.org/2001/XMLSchema-instance"

  xmlns="urn:iso:std:iso:20022:tech:xsd:remt.002.001.01">

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Remittance Workflow

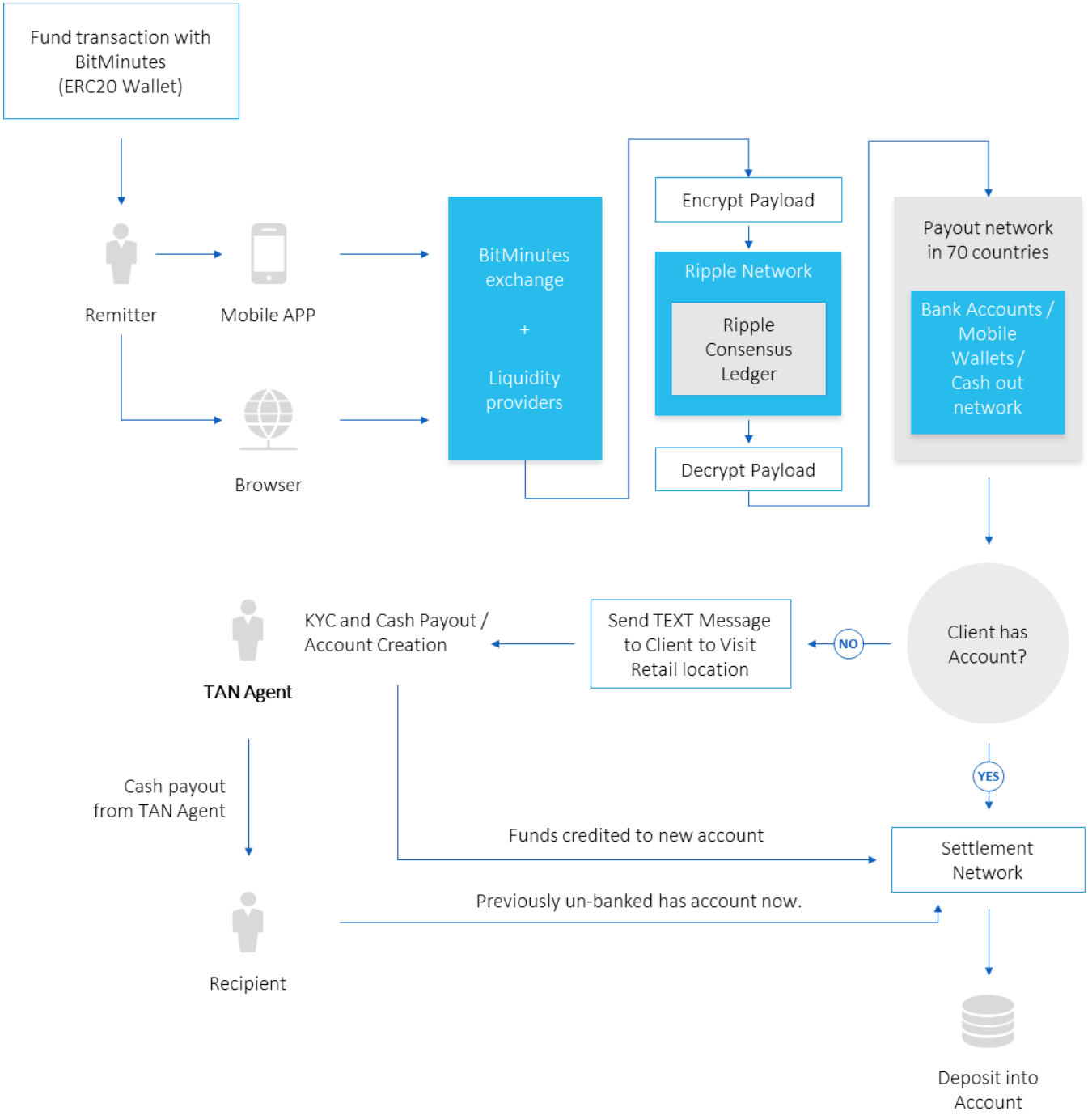

Figure 5: Remittance workflow

Figure 5 summarizes the remittance workflow sending BitMinutes via the Ripple network to enact a real-time transaction on a third-party settlement network.

Using a nominal amount of XRP, remittance instructions are encoded in the "Memo" field of outbound messages. The global remittance partners pick up this remittance instruction on the Ripple ledger in real-time and decrypt the message payload from the "Memo" field.

For more detailed information regarding an in-production implementation, please email us at Tom@BitMinutes.com.

Remittance Encryption

The remittance instructions are encrypted so that only the intended recipient can read them.

- The receiving remittance partner generates two key pairs (p and q)
- N = pq, m = LCM {p−1, q−1} (LCM : Least Common Multiple);
- Sender selects r, where r>1 and r is co-prime with m
- Sender finds the unique s such that $rs \equiv 1 (mod\ m)$
- Sender makes n and r public. Keeps p, q or s private
- Message to send is M
- Encrypted message is Mc, where $Mc \equiv Mr (mod\ n)$
- Receiving remittance partner decrypts the payload

Appendix E: Prepaid Minutes as Crypto-Currency

Prepaid top ups of mobile phones generate over $650 billion annually from over 4.6 billion subscribers, according to a report from GSMA. The remote and/or prepaid top up industry (sending prepaid minutes internationally and/or selling minutes between individuals) is estimated to be approximately 5% or a $28 billion sub-industry.

In essence, every MNO is "issuing" its own virtual currency as prepaid minutes. These minutes are simply a future obligation to provide mobile phone connectivity services at a future date on behalf of the purchaser. This is exactly the same model that every country uses to "issue" its currency, but without the obligation to provide a specific service. That country's currency has value as a medium of exchange between individuals because it is issued and approved by the government.

MNO-issued prepaid minutes perform the exact same function as above because of the same guarantee of value. In certain cases, prepaid minutes may be more valuable than an unstable country's fiat currency because there is inherent value. Therefore, by definition, prepaid minutes are a form of currency, and because they are primarily

issued, transferred and used electronically, they are truly the first “Virtual Currencies” to be issued, substantially predating Bitcoin.

Globally, there are over 500 MNOs and another 1,000+ “Virtual” MNOs (MVNO), who’s prepaid virtual currencies lack interoperability. However, consumer churn is rampant in the prepaid market as most consumers have already paid for their phone. They will switch SIM cards very quickly if a MNO sells minutes at a discount to the market. This puts severe pricing pressure on all the MNOs and makes it difficult to differentiate their service offerings. It should be noted that this model differs significantly from the U.S. MNO business model where consumers are locked into 2-year contracts that subsidize the purchase of the phone at the beginning of the contract.

Airtime Remittance Model Discussion

Airtime remittance has emerged as a viable business because money transfer costs make it impractical to send very small amounts of money abroad. Money transfer fees are not suited for very small values in prepaid models, especially with 75% of the world's mobile subscribers prepaid. These airtime transfers can be as small as 10 cents in value, a transfer that was not possible in traditional channels. The average transfer is $2 to $10 (TransferTo study), a large sum in emerging countries. Airtime transfers serve as a natural complement to cash remittances, acting as a transfer of value. Staying within the same MNO network costs the MNO practically nothing and is less easily eroded with fees because there's no need to convert the airtime to cash. In some countries, the only infrastructure is the phone company and the post office.

For many consumers, it makes sense to transfer airtime because of the ubiquity of mobile handsets and the developing world's growing dependence on wireless communications. Transferring prepaid airtime in most markets is vastly cheaper than traditional remittances that involve transfer and FX fees. In airtime transfer, there is a small cost to the sender, which translates to a huge value for the recipient. Another feature of the airtime transfer business is that airtime can be sent to multiple recipients, whereas a traditional remittance is generally larger and sent to only one recipient. In most global markets, however, airtime is not cashed out of the phone, in part because of the liquidity management challenges borne by the agents of the mobile money transfer provider.

An example is TransferTo, which provides an international top up solution designed to solve the problem of sending a small monetary gift back across a border. As a global airtime remittance hub that connects mobile operators' prepaid systems, TransferTo's model offers individuals less expensive transactions than do traditional remittance providers. The use case for international airtime top up is driven by ubiquitous mobile usage and rapidly growing Internet access across the globe.

If you would like to help us change millions of lives for the better, please contact CEO, Tom Meredith at Tom@BitMinutes.com with any questions or inquiries.

BitMinutes
Better Crypto for a Better World

Prepaid Minutes Powering
Free Global Value Transfer and Guaranteed Micro-Lending

"Better Crypto for a Better World"