Digital Money Bits (DMB):Adding Reliability to the Cross-Border Remittance Industry

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Abstract

This paper will describe how the DMB cryptocurrency will be enhanced to provide secure end-to-end transactions, delivering funds internationally as well as locally, to individuals as well as businesses. Current plans include strategies to ensure that 100% of funds reach their end recipient and provide considerations that will make this currency accessible by a large percentage of the population, regardless of socioeconomic status, creed, or race.

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*Jason's Note: I am many things - a writer, a designer, a traveler, an autodidact, and a man with a great many ideas. However, one thing I am not is a programmer. I do not enjoy writing code, and while I understand many of the principles behind the code that are generated by my ideas, I do not write it myself. I have collaborated with the DMB team on this paper as I believe Mannix to be a competent leader, a good technologist, and a man who wants to make a real difference in the world. If needed, I can be reached at j.brink@rubricpartners.io. No other channel is an official means of communication with me. Of course, nothing that is written by me, either here or through any other channel, should be taken to constitute financial advice.

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1 Introduction

Digital Money Bits (DMB) is one of the up-and-coming blockchain projects that will begin attracting attention over the next few months. Built by a team of blockchain programmers from the Philippines, this scrypt-based currency was designed to alleviate lack of liquidity and was intended to be accessible by the least advantaged levels of society.

While it was initially envisioned as a currency to help digitize the market economy, its true effectiveness has not yet been fully realized. At the moment there are only a few ways to inject the DMB token into the economy for usage. The only way to acquire DMB these days is through a conversion via several exchanges from other cryptocurrencies (such as Bitcoin) into DMB. The DMB currency can then be sent from the exchanges to any of several wallets, where it can be used for peer-to-peer commercial transactions.

While this is standard with most blockchain projects today, it fails to address the currencys nearly unlimited potential. When correctly structured and integrated into the global economy, DMB has the capacity to securely and simply transmit funds internationally, to even the most remote or technologically limited environments.

This paper will address how this can be accomplished, using the DMB token, whose primary use is based on a $446 billion annually remittance market.[1] Since DMB was created for use in the Philippines, most of the statistics discussed for this project will involve the Philippines. However, it is important to note that while the Philippines is an exceptionally accurate example of a developing country with considerable need for a reliable remittance structure, it is by no means the only nation in the world to offer opportunities and challenges similar to those of the Philippines.

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[1]https://www.economist.com/special-report/2018/05/03/the-battle-for-the-remittances-market

2   The Basics of DMB

Before a full exploration of the potential for DMB can be conducted, it is important to first establish some of the basic statistics of the DMB token. DMB was released on June 5, 2018 by Masternode Technology. Its initial incarnation as a rather vanilla Proof-of-Stake currency was first announced April 10, 2018.[2]

DMB's basic technical specifications are as follows:

COIN NAME	DIGITAL MONEY BITS
TICKER	DMB
SUPPLY	131,000,000 MAX
POS REWARD	12
POW REWARD	30 DMB per block
REQUIRED FOR MN	100000 DMB
MN REWARD	75 DMB
Algorithm	Scrypt
Address Letter	x
RPC Port	35098
P2P Port	35097
Confs. Required	6
Confs. of Mined Coins	20
POW last	10000
POS first	10001
Block size	3MB
Block time	150 seconds
StakeMinAge	8 hours

Currently, DMB has both a functional desktop wallet and an elegant system of masternodes. Emphasis should be placed on the DMB Masternode System which, when fully implemented, will position DMB as an outstanding offering on the masternode landscape.

3   DMB: Solving Problems of Liquidity

DMB is passionate about creating economic opportunities in the developing world. The DMB team has already conducted aid operations

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[2]https://bitcointalk.org/index.php?topic=3292892.0

for impoverished villages in the Philippines, where we have provided educational supplies and care packages to students who would otherwise have been unable to afford them. We plan on growing these efforts with DMB.

From a technical perspective, DMB is a well-rounded project with a solid degree of competency. However, what it currently lacks is an adequate assurance of correct delivery. The provision of secure delivery and the increased availability of DMB access to all are the purposes of this paper.

3.1   Global Remittance to the Philippines

For 2015, the most recent year with data available from the World Bank, 10.2% of the gross domestic product of the Philippines was received in the form of overseas remittances.[3] In 2017, the World Bank estimated that the total value of these remittances would exceed $33 billion USD.[4]

This is a startling statistic, given that there are only an estimated 2.3 million overseas Filipino workers (OFW), according to a 2017 survey by the Republic of the Philippines Statistic Authority.[5] The reality that over 10% of the total GDP could be provided by as little as the 2% of the population, makes the Philippines an interesting test bed for remittance technologies that can offer greater stability and security to one of Southeast Asias most populous nations.

Currently, there are several services used to process remittances to the Philippines. There is of course the grossly inefficient and slow SWIFT process, using traditional banking. The Philippines also has access to a portfolio of various web-based solutions such as Xoom and iRemit.[6] There are also the more traditional remittance services such as Western Union and Paypal, but in each of these cases, steep fees eat into the principal of the transferred funds. The cheapest of these services costs around $4 for remittance processing of a direct bank transfer and rises much higher for other types of transactions. While these services are much more reliable than mailing cash, they yet leave much to be desired in terms of speed, accessibility, and reliability.

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[3]https://data.worldbank.org/indicator/BX.TRF.PWKR.DT.GD.ZS

[4]http://business.inquirer.net/237961/world-bank-remittance-economy-lender-middle-east-europe-ofw

[5]https://psa.gov.ph/statistics/survey/labor-and-employment/survey-overseas-filipinos

[6]https://www.techinasia.com/5-webbased-money-transfer-services-filipinos-world

3.2 Blocks to Receiving Funds

Many blockchain-based remittance projects have been proposed in the past. The most well-known is the Ripple Network. However, sending XRP (the Ripple token) requires membership to various websites or expensive hardware wallets. While this may not be a significant barrier to the OFWs wanting to send tokens to family members at home, it is a barrier to their family members. Individuals on the receiving end must also have software, memberships to these websites, or a hardware wallet, all of which cost money to set up.[7]

It is also important to note that the Ripple Network is a highly centralized solution to the problems of remittance. As of the time of this writing, there are only 753 Ripple nodes globally, [8] most of which are owned by institutions affiliated with Ripple Labs. While a few independent validators exist in the Ripple Network, they are nothing compared to the numbers available under centralized control. This is not a criticism of Ripple Labs, simply an observation of the degree of centralization, a practice that is anathema to many within the cryptocurrency community.

3.3 Solutions: Putting DMB to Work

DMB and the DMB Masternode System can serve as a response to this centralization by allowing anyone to set up a node to assist in securing the network. While at the moment only 150 DMB masternodes are configured , this number will grow rapidly as the project gains popularity.

Collectively, these gaps in the market provide interesting opportunities for DMB to step up and become a secure provider for global remittance to the Philippines. This opportunity is further enhanced by the fact that the Philippines has a standing policy not to tax remittances in place, according to a 2017 statement by the Philippines Department of Finance. The intentional lack of a taxation structure makes it possible for more innovative alternative sending structures

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[7]There is apparently one Android wallet for XRP, Toast Wallet, but I have no personal experience with it. Additionally, a search for the Toast Wallet in the Google Play store results in no fewer than ten different confusingly named wallets from different publishers. This is hardly a recipe for consumer peace of mind. It is for these reasons that this app was not included in the above list.

[8]https://xrpcharts.ripple.com/#/topology

to be implemented without running afoul of regulatory bodies in the Philippines.

The implications of this are rather staggering. When companies in remittance-heavy countries such as the United States, Canada, the United Arab Emirates, Thailand, and other countries that host large number of OFWs, become involved in the DMB ecosystem, they will be able to build reserves of DMB that can be paid out to workers at their request at a later date. This will considerably reduce the real-world cost of the OFW employment for early adopters of DMB. In addition, these reserves will reduce the amount of DMB in market circulation and help stabilize the price of the token, making it more attractive to even more companies that are seeking to build their reserves.

Given the relatively small size of the DMB ecosystem, the first companies to acquire DMB reserves on the open market will stand to benefit the most from later potential increases in value, as the token gains broader usage in the Philippines and abroad. For example, a purchase of 1,000,000 DMB tokens at present market rates would be roughly $5000. However, if a higher degree of use can be attained and maintained in the future, this will result in significant benefit to companies that have taken an early interest in the DMB ecosystem.

4 DMB Bungee: A Remittance Innovation to the DMB Ecosystem

There are two primary concerns for anyone sending remittances overseas. The first and most important overriding concern is that the funds reach their intended destination. Coming in a close second is the ease and simplicity of sending the funds.

Blockchain technologies frequently fail on both counts. They are often horridly unfriendly for the average layperson, when it comes to sending funds. The complexity of the addresses and the generally obfuscated nature of the technology are quite off-putting to the non-technical user. People have a hard enough time with the long and involved account and routing numbers required for sending ACH transmissions in the United States, let alone the 34-character alphanumeric public keys required for international transmission.

With traditional banking, if you inadvertently misdirect your funds, there is a clear process by which they may be retrieved. However, if

you are sending funds on pretty much any blockchain and you transpose two letters or characters, your funds cannot be recovered. Cryptocurrency forums are filled with requests for people to send misdirected funds back to their originators. Unfortunately, most of these requests go unanswered because the immutable nature of blockchain makes it impossible to do anything for the unfortunate sender.

Therefore, DMB will create the "DMB Bungee." Currently, while DMB is a masternode coin, these masternodes do not have any substantial computational requirements placed upon them. These masternodes could serve as vital buffers for transactions sent across the network, allowing the integration of a bungee recall functionality. It would work something like this:

1. User A desires to send funds to User B this could be a remittance or a simple payment for which confirmation of receipt is needed.

2. User A configures the payment in their DMB wallet and enables the Bungee Recall Option, inputting a claim code. They then send the transaction.

3. This transaction is broadcast first to the masternodes, which reach consensus on the requirements needed to process the transaction.

4. User A then phones, emails, messages, or otherwise contacts User B and provides them the claim code. This could be anything from a simple word to a much more complex alphanumeric string used for greater security.

5. User B loads their wallet and opens their pending transaction tab. They select the transaction from User A, and enter the claim code.

6. The claim code is broadcast to the masternodes, which then release the funds to User Bs wallet.

7. In the event the code is not entered correctly (after a set number of attempts to allow for typos), or if it is not claimed within a set time interval (24 hours, for example), it is then re-broadcast back to the originating wallet.

This serves several purposes. First, it allows an ironclad receipt of funds to be broadcast to the network. It would be very difficult for a recipient who claimed the funds using their claim code to say that they did not receive the payment. It would also protect against misdirected

funds and remove the risk of funds disappearing into the ether upon sending.

The DMB Bungee would be the first implementation of this sort of system in a blockchain project and would go a great distance toward making blockchain usage friendlier for average users. In combination with mobile wallet technology, this would make DMB one of the more robust solutions for the sending of funds. Sending digital currencies is often as irrevocable as jumping off a bridge you wouldnt do that without a bungee cord, so why should you make a payment without one?

4.1   DMB Bungee Billpay: Bringing Security and Reliability to Local Payments

Additional applications for DMB will be realized in a localized payment ecosystem, in which the DMB Bungee utility can be used to provide safety and security for the purpose of paying local bills. If adopted by local merchants and service providers, it will create a system in which local customers can pay their bills in a transparent and easily verifiable manner. This will eliminate the need of customers or merchants to open disputes over payments, since all payments would be immutably enshrined in the blockchain.

Combined with bungee functionality, DMB could also allow donors to distribute claim codes in advance to aid recipients, making specific individuals the only ones able to claim those specific funds. As things stand now, in many foreign aid contexts the funds pass through so many hands - often with sticky fingers - that when they finally reach their intended destination, they have been diminished to the point that they do little to no good to those they were originally intended to serve. This is a problem that DMB can help solve.[9]

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[9]Note from BitBender - In one of my recent papers, for which I won an award from the Bill and Melinda Gates Foundation and the Global Development Network, I described the use of blockchain technology for aid disbursement as a way to avoid the problems endemic to foreign aid. In that paper, I theorized the existence of a partly centralized aid network and a token issuance authority. While I still believe there is a place for semi-centralized and state-backed blockchain projects, I believe that in many situations, projects like DMB can fill a vital role in the sending of aid funds to recipients in the developing world.

5   Additional Use Cases

5.1   DMB Exchange: Supporting Local Exchanges

Central to the adoption of any cryptocurrency is the fungibility of that currency with local monetary conventions. While it is hoped that an end goal would be an entirely digitized system of exchange (of which DMB would play a large part), certain situation will always require fiat currency in whatever local form is required. It is the ambition of DMB to create a software infrastructure to support local exchange services so that they can serve those who hold DMB locally. Independent DMB exchange service operators will be given preferential pricing on bulk purchases of DMB so that they can serve the needs of their local customers. By building an infrastructure that will allow DMB to expand into markets otherwise relatively untouched by blockchain technology, we will be creating an environment that will allow DMB to grow continuously into the future.

5.2   DMB Sales Points: Providing an International Use Case

While a great deal of the initial ecosystem development for DMB is centered around the Philippines, this does not mean that it cannot or should not be developed for use internationally. There are a great number of potential uses of the DMB token. The first implementation of international point-of-sale using the DMB token will be an online e-commerce platform. Initially, this platform will sell digital products, such as Steam codes and gift cards. However, it is hoped that in the long run it will be possible to turn this into a consumer-to-consumer marketplace, based upon the DMB token and leveraging the international DMB community. It will even be possible to build a use case around temporary knowledge work in developing economies. By creating a system that will allow employers to hire short-term labor using DMB, a much broader economy can be created. This will naturally tend toward expansion as more service providers and potential employers sign on.

5.3   DMB Microlending: Leading the Disruption of Poverty

In areas where the DMB ecosystem has been well established, it will be possible for small lending institutions to be developed to provide a degree of liquidity for the local economy. Due to the unique masternode structure of DMB, it will be possible for loans to be made without interest, if the lender desires. This is an important consideration in areas with a high proportion of Islamic adherents, as interest is forbidden under the strictest interpretation of their ecclesiastical code. A proper implementation of the system will enable DMB to spread into areas previously unexplored by proof-of-stake and masternode cryptocurrencies. This will make DMB accessible to an additional 1.8 billion potential users.

6   In Conclusion

The implementation of Bungee functionality will solve the problem of secure end-delivery of funds, making DMB the method of choice for international remittances. Its individualized claim code will allow anyone to securely send and receive funds, regardless of location. In addition, the projects provision for interest-free lending opens up tremendous untapped potential within the Islamic world.