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# EDITORS' NOTE



This Bitcoin handbook is the culmination of a collaborative effort by over 15 volunteers convinced of Bitcoin's potential to improve the life of its users. It is a truly non-profit enterprise whose goal is introduce individuals involved with non-profit and charitable organizations to a free and powerful resource that can help them implement their own non-profit mission. All the information necessary relating to why and how your organization should accept Bitcoin can be found in this standalone document.

This handbook is also meant as a tool for Bitcoin advocates to convince organizations to accept Bitcoin donations. Its production was financed entirely by donations from the Bitcoin community and the generous support of our sponsors.

Through our work at the Bitcoin Foundation Canada and Bitcoin Embassy, both of which are non-profit organizations, we have dedicated the past year of our lives to the promotion of Bitcoin in the hopes of accelerating its adoption by those who need it the most.

We do this simply because we strongly believe that cryptocurrency is a tool that empowers people to make their worlds a better place, democratizes access to financial services and allows non-profit organizations to increase their efficiency and transparency.

We sincerely hope that our readers will find the arguments contained in this handbook compelling and, most importantly, will realize just how easy it is to start using Bitcoin today.

Francis and Noémie

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# **FOREWORD**

Roya Mahboob,

Co-Founder of the Women's Annex Foundation

News about Bitcoin has been making headlines for the past two years and the financial sector is not the only one taking notice. Bitcoin is now used globally on a massive scale, with many establishments and online shops accepting Bitcoin as a mode of payment. In developing countries, Bitcoin is treated as an alternative banking system, and many businesses are now accepting Bitcoin as a mode of payment for services rendered. Bitcoin has already changed the way people transact, and it has opened new opportunities for people who have been burdened by banking ineligibility or border constraints.

#### WHO USES BITCOIN?

Since its conception 5 years ago, the value of Bitcoin has grown enormously. Developers, investors, and entrepreneurs flocked to the crypto-currency market to get a piece of the virtual gold rush, a process which has turned Bitcoin into a major Internet currency. People who use Bitcoin are not only motivated by the potential for profit, but also by the security and flexibility it provides. Trading using Bitcoin is as easy as using a smartphone to make payments. Transfers can be made pseudonymously or with identification, and Bitcoin is secured using the Blockchain. More importantly, Bitcoin serves as a great alternative for people who cannot qualify to use the traditional banking system. People in developing countries who don't have access to a bank account can alternatively use Bitcoin to execute transactions. The technology of Bitcoin can open up new doors and empower people in developing countries, especially women.

"The technology of Bitcoin can open up new doors and empower people in developing countries, especially women."

# USING BITCOIN FOR THE FUNDING AND MANAGEMENT OF NON-PROFIT ORGANIZATIONS

Due to its volatile nature, Bitcoin transactions are not widely used by non-profit organizations and charities, but many of these organizations are now examining its versatility and ease-of-use. There are nevertheless many non-profit organizations that have already seen the benefit of accepting Bitcoins for donations. The Bitcoin payment system completely bypasses the traditional banking system, therefore letting the donor and the non-profit organization avoid fees usually charged by banking institutions to accomplish the same service. Last summer, one of the Internet's biggest non-profit organization, Wikimedia, started accepting Bitcoin donations, and it reported \$140,000 in Bitcoin donations only after the first week.

As the number of Bitcoin users grows, so does the number of non-profit organizations accepting Bitcoin donations. Bitcoin transactions transcend borders and regulations of the traditional banking system. Non-profit organizations can further maximize the donations sent through Bitcoin since these transfers are done directly without the mediation of a financial institution, therefore avoiding significant transaction fees.

The increasing number of Bitcoin users in developing countries is a testament to the importance of digital literacy. As a non-profit organization lobbying for digital literacy for women, Women's Annex Foundation also advocates the use of Bitcoin for day-to-day transactions, which opens up a myriad of opportunities for women in developing countries to be economically independent.

#### **DIGITAL LITERACY**

Bitcoin is far from being a household name and only a small percentage of the population are aware of what Bitcoin is and how it would bring new opportunities, especially for women. In developing countries, the privilege of being digitally literate is held only by a few, and it is through digital literacy and the use of Bitcoin that people, especially women, can become independent.

Digital literacy empowers women to be able to market their skills, products, and services in an international setting. Through the use of Bitcoin, women who are seeking job opportunities online can be compensated without having to worry about being able to use banking services.

Women's Annex Foundation has integrated Bitcoin trading in its digital literacy trainings to further educate women about Bitcoin and the opportunities it presents. We are also trying to connect with beneficial technologies to spread our message for empowering women through digital literacy and economics. As digital literacy leads to economic independence, it is key for women in developing countries to experience that personal development.

Today, our foundation is linked with www.WomensAnnex.com, a platform for women in developing and developed countries where they share their ideas and reach out to their goals. The WomensAnnex. com platform uses the bitLanders.com technology, which creates an opportunity for women to earn Bitcoin by creating content, blogs, and films. This allows women to be able to hone their skills and digital literacy with the use of Bitcoin. Women's Annex believes that empowering women with digital literacy would further help them polish their craft and be ready for advancements in the digital era.

"Non-profit organizations can further maximize the donations sent through Bitcoin since these transfers are done directly without the mediation of a financial institution, therefore avoiding significant transaction fees."

#### **KEEPING UP WITH BITCOIN**

The emergence of Bitcoin has redefined the way people think about the whole banking system. In this digital age, even the 1's and 0's have their weight in gold. The cryptocurrency has shown great resilience since it was introduced and it shows no signs of slowing down. The Bitcoin technology is where the future of banking technology is heading, and it's upon us to close the digital literacy gap to keep up with Bitcoin.

"The Bitcoin technology is where the future of banking technology is heading, and it's upon us to close the digital literacy gap to keep up with Bitcoin."

# **ADOPT BITCOIN**

- ► WHAT IS BITCOIN?
- ► WHY ACCEPT BITCOIN DONATIONS?
- ► HOW TO ACCEPT BITCOIN?

# WHAT IS BITCOIN?

You may have heard of Bitcoin as a "digital" or "virtual" currency which is used for online payments as an alternative to credit cards and PayPal. Indeed, over 350 non-profit projects and charitable organizations are now accepting Bitcoin donations, with more than 100 000 merchants using Bitcoin as means of payment for goods and services thanks to Bitcoin payment processors such as Coinbase and BitPay.

But Bitcoin is much more than just a payment tool: it is a technological innovation that has the potential to empower people of all nations to take control over their financial activities and cut down on the costs imposed by middlemen such as banks, credit card companies and money transfer services. Just like the Internet has given humanity unprecedented access to free knowledge and instant global communication, Bitcoin can completely democratize access to cheap and efficient financial services. All of this begs the question: what exactly is Bitcoin?

"You don't need to understand the technical details of Bitcoin to use it, just like you don't need to understand the laws of physics in order to ride in an airplane"

#### A NEW TECHNOLOGY

The simplest definition of Bitcoin is the one provided by Andreas Antonopoulos, a world renowned digital currency expert, in his book Mastering Bitcoin:

"Bitcoin is a collection of concepts and technologies that form the basis of a digital money ecosystem".1

Bitcoin is first a technological innovation and the digital currency that you have been hearing about in the news is an application of that technology. In fact, the reason why digital money such as Bitcoin has never existed before is simply because the necessary technology had not yet been invented.

This type of computer technology relies on decades of research in mathematics, cryptography and distributed systems. Fortunately, you don't need to understand the technical details of Bitcoin to use it, just like you don't need to understand the laws of physics in order to ride in an airplane.

The most important aspect of the Bitcoin technology is that it was made available to the public as a free and open-source software in 2009, which means that it is not owned or operated by any organization whatsoever. Just like the Internet, Bitcoin is not a corporation and does not have a CEO. The real identity of Bitcoin's creator remains unknown to this day – but it does not matter since he or she disclosed Bitcoin's "technological recipe" to the public by openly publishing it on the web. Because it is 100% public, we are assured that there is no secret ingredient or hidden backdoor. Ultimately, this cryptocurrency is simply a free tool that everybody can use however they wish.

<sup>&</sup>lt;sup>1</sup> Andreas Antonopoulos, Mastering Bitcoin, O'Reilly Media, 2014

## BITCOIN: BOTH A DIGITAL CURRENCY AND A PAYMENT SYSTEM

Perhaps more important than understanding how the Bitcoin technology works is appreciating what it allows us to achieve: the creation of an integrated and completely independent digital monetary and financial ecosystem. This system is fully functional and is continuously growing.

In plainer terms, Bitcoin is two things:

- "Bitcoin" is a transaction (or payment) network
- "Bitcoins"<sup>2</sup> are digital currency units usedas tokens of value in the network

#### The payment network

Bitcoin can be first conceived as a transaction or payment network in that it is used as a vehicle that transports value from one person to another over the Internet. Any merchant or non-profit organization can join the network and gain the ability to be part of a Bitcoin transaction, meaning that they can use Bitcoin to accept payment for goods and services or receive donations. It is a day-to-day payment tool that is nearly as easy to use as an email account. For the average user, Bitcoin serves the same function as a bank transfer or credit card transaction but significantly faster, cheaper, more convenient and more secure.

Even better: it does so without any form of requirement or intermediary – it's just like a "hand-to-hand" cash exchange, but over the internet. This means that it is impossible for anyone to fraudulently spend someone else's Bitcoins, which also implies

"An organization which receives Bitcoin payments or donations cannot be billed chargebacks for those transactions"

that an organization which receives Bitcoin payments or donations cannot be billed chargebacks for those transactions, and that Bitcoin transactions cannot be canceled or reversed in any way.

If you're wondering why Bitcoin is useful, think of it like this: it gives its users the ability to instantly teleport cash from one impenetrable vault to another, from and to anywhere in the world, at almost no cost. This is considerably superior to today's "analog" payment systems. In a way, Bitcoin is to payment what email is to the traditional postal service.

#### The currency

A Bitcoin is a digital token that is used to store and transfer value between participants in the Bitcoin network. Indeed, within the Bitcoin system, value is not exchanged in the form of national currencies such as dollars, precious metals or other assets – it is always denominated in Bitcoins. This means that people who transact on the Bitcoin network must first acquire Bitcoins, much like you need to change your local currency when you go in a foreign country with a different currency. It is however possible to accept Bitcoin payments or donations and have the Bitcoins automatically converted to national currencies.

<sup>&</sup>lt;sup>2</sup> While this is not an official rule, Bitcoin with an upper-case "B" usually refers to the Bitcoin network or technology while Bitcoin with a lower-case "b" usually refers to the currency.

Bitcoins only exist in digital form, so there are no physical Bitcoins. The value of Bitcoins comes from the fact that they are useful and scarce. They are very useful since they are the only form of currency which can be transferred in the Bitcoin network. They are scarce because the total number of Bitcoins that will eventually be in circulation has been mathematically limited to 21 million units. In the long-term, if the demand for Bitcoins continues to rise, the value of each individual Bitcoin will also continue to rise. This is the opposite of our national currencies such as dollars and euros, which governments continuously create out of thin air and which lose value each year because of inflation. As a currency, Bitcoin is related more closely to gold than paper notes in that it has useful properties and it is rare.

An important note: the currency and payment network elements of Bitcoin, although they are both conceptually different things, cannot exist without the other. Bitcoin is at the same time the vehicle which transports value and the value transported in the vehicle. This is very different from the traditional economy where currencies such as Euros are transmitted and stored in banks and payment networks such as credit cards.

#### **HOW IT WORKS: THE MAIN CONCEPTS**

# Bitcoin wallets, public addresses and private keys

When a person joins the Bitcoin network, we typically mean that he has procured himself a Bitcoin wallet. A Bitcoin wallet is the interface through which users will access the Bitcoin network and, more importantly, be able to utilize the Bitcoins that they own. It can be procured for free as a software on a computer, a browser extension, an application on a mobile device or a simple web page which would look much like an online banking portal.

Getting a Bitcoin wallet and thus gaining access to the Bitcoin's

"There is no single entity responsible for making sure that the system works because participants in the Bitcoin network are collectively fulfilling the tasks necessary for the system to operate and be secured."

banking and financial opportunities is as easy as making a Twitter account. There is no documentation or private information necessary, not even a name or email address. An unlimited number of wallets can be generated, by anyone, anywhere, without any licenses or permissions required.

To each Bitcoin wallet is associated one or many matching pairs of a Bitcoin address and a private key (they consist of a string of numbers and letters). The Bitcoin address is someone's identification in the network, and each address is associated with a balance of funds denominated in Bitcoins. The private key can be thought of as the password which allows users to have access to the funds associated with the matching public address. To put it simply: the Bitcoin address is like a person's email address while the private key is like the password. When we say that someone owns Bitcoins, what we mean is that he is in possession of a private key which corresponds to the public address to which those Bitcoins are associated.

There is no official Bitcoin wallet, and you are free to choose whichever you prefer. You will find additional details on this topic in Michael Perklin's article in this Handbook.

#### How a Bitcoin transaction works

If for instance your organization has just created a Bitcoin wallet and I want to give you your first Bitcoins by making a donation, the following is how a typical transaction would take place.

I will first log into my Bitcoin wallet which is installed on my mobile phone. Once logged in, I will go to the "send funds" section of my wallet and I will enter your public address in the "recipients" section (much like when sending an email). I will select the amount of funds (1 Bitcoin) to send and press "send funds". Within a couple of seconds, your organization will be able to see that I have sent you some Bitcoins as these will appear in your Bitcoin wallet's balance. That's it!

At this point, your organization's Bitcoin address is associated with a balance of 1 Bitcoin. To spend those Bitcoins or convert them into cash, all you need to do is use your wallet, just like I did, and make a Bitcoin transaction. If you decide not to exchange those Bitcoins for national currencies, they will be safely stored as recorded entries in the Blockchain until you decide to spend them.

Under the hood, things are a lot more interesting. What really happened when I pressed "send" is that my Bitcoin wallet instantly broadcasted a public message to every participant in the Bitcoin network announcing that I had transferred 1 Bitcoin from my address to your organization's address. The message was digitally signed (by my wallet) using my private key, which guarantees that I was indeed the legitimate owner of the Bitcoin. After seeing the transaction being announced, participants in the network will collectively validate the transaction and record it permanently in a public digital ledger called the Blockchain. The data in that ledger is continuously updated and is stored by the computers participating in the network – it is available for viewing by anyone.

All of these operations are performed in a decentralized manner by the participants in the network, people just like myself, who are simply running specific software on computers. There is no single entity responsible for making sure that the system works because participants in the Bitcoin network are collectively fulfilling the tasks necessary for the system to operate and be secured.

As I write these lines, my computer is relaying broadcasted messages to other users and storing the blockchain ledger's data which has every public address' entire balance sheet, with very minimal conscious effort on my part.

Once a certain number of transactions has been validated as permanent entries in the Blockchain, new Bitcoins are introduced in the system. These newly introduced Bitcoins are awarded to the participants in the network who have dedicated their computers (which also require a lot of electricity to function) to performing these validations, according to the amount of work that they have put in. This gives them the incentive to continue validating transaction and provides an efficient and just method of distributing the new currency at time of its issuance.

## THE KEY CONCEPT OF BITCOIN: DECENTRALIZATION

Bitcoin's most distinctive feature is that both its network and its currency are completely decentralized, meaning that they are not controlled by any individual or corporation, be it financial institutions or government agencies.

In our current monetary or financial system, certain tasks need to be performed in order for the system to function such as issuing a currency, preventing counterfeiting, validating transactions between users, keeping track of balance sheets and physically (or digitally) storing money. These tasks are performed by an oligopoly of financial institutions, credit card companies and central banks. Without Bitcoin, you simply have no alternative to using these centralized institutions if you want the ability to accumulate and transfer wealth. Not only do you have to pay these institutions to use their services, but you also have to trust them with your money and private information.

The Bitcoin network can be conceived as many computers linked together over the internet. With Bitcoin, the tasks mentioned above are performed collectively by the participants in this network in a distributed manner. Every connected computer is in some way involved in the process of operating and maintaining the Bitcoin network, for their own benefit but also for the benefit of every other user.

It is important to realize that it is the first time in history that an individual is able to safely accumulate and transfer money without the need to rely on, and pay for, a third party such as a bank or credit card company. It reduces the cost barriers to accumulating and transmitting wealth, a necessary condition for the billions of unbanked individuals to free themselves from the vicious cycle of poverty. It is an answer to very real socio-economic problems such as credit card frauds, bank bail-outs, money supply inflation, financial censorship, arbitrary asset seizures and privacy violation. In short, Bitcoin gives everyone on earth unrestricted and free access to safe and efficient financial services.

# WHY ACCEPT BITCOIN DONATIONS?

#### Elizabeth Ploshav.

Member of the Board of the Bitcoin Foundation

#### Francis Pouliot,

CEO of the Bitcoin Foundation Canada

Bitcoin is the world's first decentralized digital currency, a global medium of exchange which knows no boundaries. Bitcoin is not just a theoretical experiment – it is a revolutionary tool that has already demonstrated its ability to enhance the lives of ordinary people, enabling them to transact directly with others around the world without the need for third-parties such as banks.

From programmers and mathematicians to lawyers and influential businesspeople, the Bitcoin community is animated by a sincere belief that cryptocurrencies will bring about profound and positive change.

But why should you, as someone involved with the management of a charitable or non-profit organization, make the decision to accept Bitcoin donations?

The short answer is:

- 1. The benefits of using Bitcoin greatly outweigh its almost non-existent costs
- 2. You can accept Bitcoin donations and have them automatically converted to national currencies you are never exposed to any risk
- 3. Support Bitcoin's socio-economic outcomes of financial inclusion and empowerment

"Educating yourself about their potential benefits and costs is the first step to making the right decision"

It is important to remember that Bitcoin is a free and open-source technology and not some sort of corporation. Use of Bitcoin is strictly voluntary and there are no contracts, requirements or gatekeepers involved whatsoever. If you do not like your experience in accepting Bitcoin donations, you can choose to simply stop using it at any time without any cost.

Adoption of Bitcoin and other cryptocurrencies is constantly rising. There is ample evidence suggesting that cryptocurrencies will play an increasing role in consumer behavior in the years to come. As such new technologies emerge, new fundraising and management tools that could make your organization more prosperous and efficient are becoming available. It is up to you to integrate these new tools or not, and educating yourself about their potential benefits and costs is the first step to making the right decision.

# AUTOMATICALLY CONVERT BITCOINS TO YOUR LOCAL CURRENCY: BENEFITS WITHOUT RISK

It is very easy for your organization to accept Bitcoin donations without being exposed to any risk and without any additional extra costs.

Imagine that somewhere in a distant country, Bob comes across your organization while browsing the web. He finds himself agreeing with your goals and wants to support your mission by making a 10\$ donation. Bob is one of the millions who use Bitcoin, he doesn't like giving away his banking details online and is the type that makes many small donations annually. Your organization's acceptance of Bitcoin donations is a condition for him to send you his funds.

On the other hand, your organization may not yet be fully convinced or ready to be a direct party to a Bitcoin transaction. You would very much appreciate Bob's donation and take advantage of Bitcoin's very low fees, but you would rather receive the donation in the form of a national currency (i.e. dollars, euros) than in digital currency.

Fortunately, thanks to the Bitcoin services industry which has been created around the Bitcoin technology, it is possible for Bob to send Bitcoins to your organization and for you to have these Bitcoins automatically converted into national currencies. You can find a list of such services in the helpful resources section of our website www.givebtc.org.

Such businesses act as intermediaries between Bob and your organization. They would typically collect Bob's Bitcoins on your behalf and in turn credit your account with dollars or other currencies, so that both Bob and your organization's needs are met. Moreover, many such Bitcoin payment processors offer these services for free to registered non-profit organizations.

Signing up to such services allows you to widen your pool of potential donors and take advantage of the Bitcoin community's notorious generosity, all without having to pay the usual credit card or online payment fees. You never have to be in possession of Bitcoins and you are never exposed to any additional risk.

As you will see in the next article, these services are very flexible: with many Bitcoin payment processors you can choose to receive all your Bitcoin donations in the form of national currencies, or have a portion of them sent to you in Bitcoins and the rest in national currencies.

In other words, you have absolutely nothing to lose by accepting Bitcoin donations. However, using this method, there are some things that you are losing: all the other benefits that come from receiving and using Bitcoin directly.

#### **USING BITCOIN THE BENEFITS**

#### **Accepting Bitcoin donations is 100% free**

- other solutions are expensive

One of the most visible and important benefits of Bitcoin is that the receiver of funds in a transaction never has to pay any fees whatsoever. In that sense it is similar to traditional postal services: the sender buys the stamp but the recipient doesn't have to pay anything to get his mail.

When Bob initi ates his Bitcoin donation to your organization, the Bitcoin wallet he is using will ask him to include a transaction fee (or will automatically add the minimal fee for the transaction to be processed). For a regular transaction, the fee is 0.0001 BTC (roughly 5¢). The fee is denominated in Bitcoin and is collected by the people who lend their computing power to the Bitcoin network in order to validate and timestamp Bitcoin transactions (called miners). This process allows the network to operate smoothly and discourages "spam" transactions.

On the contrary, if you are accepting donations via some form of internet payment gateway, you are most probably paying high fees. Your organization should carefully review how much fees you are paying – your fee statements might very well be our most potent argument for you to accept Bitcoin. These fees are collected by the financial institutions involved in the transaction.

These fees may come from a variety of sources. Charities and other non-profits who set-up an online merchant account in order to receive donations are frequently charged a "one-time fee" for getting set-up (sometimes called Application Fees, Setup Fees, etc.). You may also be subscribed to an online payment processing platform which charges you monthly fees (usually between \$10 and \$30 per month).

Next come the transaction fees, which you will normally incur for every online donation you receive. There are two types of fees: "per item" fees (a flat rate for every transaction, usually between \$0.20 and \$0.50) and a discount rate (usually 2-4% of the donation amount).

Finally, you are billed chargebacks in case of fraudulent transactions. When a credit card number is stolen from its rightful owner, it is not uncommon for thieves to test the credit card by making a donation to a charitable organization before they attempt other purchases. The rightful owner will dispute these charges to the credit card company, which will cost your organization a chargeback fee. For instance, with PayPal, the chargeback fee is \$20. You will also lose the donation amount.

It is also worth mentioning that chargebacks simply do not exist in the Bitcoin system as it is impossible to fraudulently spend someone else's Bitcoins without the approval of the owner. This means that you can accept Bitcoin donations without any risk of payment fraud.

"chargebacks simply do not exist in the Bitcoin system as it is impossible to fraudulently spend someone else's Bitcoins without the approval of the owner" Even by using PayPal, in most instances the cheapest alternative after Bitcoin, you are still paying high fees for every donation you receive. The following will give you an idea of the minimum transaction fees you would pay with PayPal to accept donations, compared with Bitcoin.<sup>1</sup>

Figure 1 – Transaction fees, Bitcoin vs. cheapest online alternative (PayPal)

	Registered 501(c) (3)Charity status	Yearly donation amount	Donation method	Fees you pay
	No	\$10 000	Paypal	\$640
	Yes	\$10 000	Paypal	\$570
	No or Yes	\$10 000	Bitcoin	\$0

## A CURRENCY WITHOUT BORDERS, THE CURRENCY OF THE INTERNET

The first major positive disrupting force for charitable giving has been the rise of the internet. Since 2001, over \$1 billion of charitable donations were made online. This is a growing trend: between 2012 and 2013, e-donations rose by 20% (\$190 million in 2013).<sup>2</sup>

The internet has started to erode national border obstacles and physical distance between individuals and organizations all over the world when it comes to communication and information sharing. Bitcoin will have the same effect for international transfers of wealth, including donations.

While online donations are increasing, the payment networks and systems that process these donations remain resolutely analog. Credit cards have been around since the 1960's and wire transfers were originally sent over telegraph lines in the 19th century. They were simply not designed for the internet.

On the other hand, Bitcoin knows absolutely no borders and is 100% compatible between all users, everywhere in the world, regardless of their jurisdiction. Making a Bitcoin donation from Peru to a charity based in Indonesia is the exact same process as someone paying for his coffee with Bitcoin on his way to work. Bitcoin is a global transaction network in which national borders and physical distances are completely irrelevant concepts. Just like with email, neither the fees nor the transaction time are subject to variations depending on the sender or the recipient's location. Bitcoin is, simply put, the currency of the internet.

This aspect of Bitcoin may very well make it a major factor in the rise of the new paradigms of charitable giving such as international micropayments and crowdfunding. Bitcoin allows potential donors all around the world to donate a very small amount of funds overseas cheaply and rapidly, without engaging in the online bureaucracy of financial institutions. Combined with the rise of crowdfunding and peer-to-peer giving platforms which have already proven to work, Bitcoin may be the key to unleash the relatively untapped potential of international charity crowdfunding and peer-to-peer giving.

"Bitcoin is a global transaction network in which national borders and physical distances are completely irrelevant concepts"

<sup>&</sup>lt;sup>1</sup> The following applies for a U.S.-based non-profit organization which receives 50% of its donations from U.S. donors and 50% from international donors, for a \$10 average donation.

<sup>&</sup>lt;sup>2</sup> Network for Good, "The Digital Giving Index", The Online Giving Study, 2013.

## Increasing transparency, accountability and trust: open your books to the world

One of the fundamental components of charitable giving is trust. Donors give away their wealth freely without (necessarily) expecting a tangible product or service in return. In most cases, the primary benefit a donor will receive in compensation for his donation is in knowing that his funds are being used to implement a mission or goal set by your organization. In order for donors to trust the recipient of their donation, the recipient must make himself financially accountable by demonstrating a degree of transparency as to how the funds are being used.

Financial accountability can be significantly enhanced by using Bitcoin, making it a very powerful tool to implement transparency measures which increases donor's trust in your charitable or non-profit organization.

As discussed in the previous article, Bitcoin consists of a distributed ledger in which all transactions are recorded and validated by its users. This ledger, called the Blockchain, is available for anyone to review. This means that every single transaction made to and from a Bitcoin address is public and cannot be hidden in any way.

Your Bitcoin donation address, at which the Bitcoin donations to your organization are sent, is by default not associated to your organization – it looks like a string of letters and numbers such as 1A3zbcpxNpMysaXvyotTXcftCpLMfRK6TZ. By typing this address into a website or software that is able to explore the Bitcoin Blockchain³ anybody can instantly see the balance of funds associated to the address, from which address the funds came from and to which address the funds are sent.

Bitcoin addresses are pseudonymous: anybody can monitor any address but, by default, nobody knows to whom the address belongs. However, by putting your donation address on your website, you can associate your real-world identity to your Bitcoin address. In this case, anybody that wants to see how many donations have been sent to you and where you are sending your funds can do so by entering your Bitcoin address into a blockchain explorer such as blockchain.info.

It is important to note that this functionality is highly flexible, and you can choose which level of privacy you desire. This transparency feature of Bitcoin is completely voluntary and you can choose to optout if you so desire, for instance by using Bitcoin wallets that allow for greater anonymity.

"you can be completely transparent with your funds, in real time, without having to use an auditing service"

But if you do choose to use this feature, you can be completely transparent with your funds, in real time, without having to use an auditing service. Moreover, donors who wish to publicly identify themselves with their donation can show the world they made a donation in a way that is completely verifiable: all they have to do is provide the transaction id of their Bitcoin donation and everybody who wishes to verify the validity of the donation can easily see that his Bitcoins were sent to your Bitcoin address.

<sup>&</sup>lt;sup>3</sup> The most popular of these websites are blockr.io and blockchain.info

# Respect donor privacy and reduce fraud potential

With Bitcoin, the only information a donor needs to give in order to be able to send you his funds is your Bitcoin address and the amount of funds they want to send. No other information, no paperwork and no permission is needed for someone to use Bitcoin. Making a Bitcoin donation is private and non-intrusive.

It is relatively easy for a Bitcoin user to generate new addresses from which he can send funds to your organization. This means that users have the ability to easily make donations with a high degree of anonymity. You never need to know who the donor is nor must you collect any information from him of any kind. This allows donors to choose to privately contribute to your mission by making a donation without publicly identifying themselves to your organization or cause. Once again, this high degree of privacy is a feature that donors can opt-out of.

# "Making a Bitcoin donation is private and non-intrusive"

This is particularly useful if your organization's mission and goals are sometimes viewed as controversial, for instance LGBT rights activism or fringe political organizations. There are many reasons why a donor might want to remain anonymous, and enabling this feature by accepting Bitcoin can only increase your donor base.

On the other hand, donors might also want to associate themselves publicly with your organization but might not want to give away private information via your donation channel. If they make a donation via a traditional online payment channel such as PayPal, credit card or bank transfer, the donor's private information falls in the hands of these institutions – which may be accidently or maliciously leaked. In many cases, the payment channels that you offer to your potential donors may require them to reveal their contact information and banking details, highly valuable information for fraudsters and hackers.

Donors are right to be weary of using their credit cards online. In 2013, 11.5 million Americans were victims of identity fraud, with 7% of U.S. households reporting some form of identity fraud. The average financial loss was \$4930, for total losses of over \$24 billion dollars. The leading cause of identity theft (64%) was from credit card payments.<sup>4</sup>

Not only does Bitcoin protect the recipient of funds from the financial losses associated with fraud and identity theft (chargebacks), but it also protects the sender of funds because they do not have to provide any private information or banking details online.

#### **Avoid censorship**

A fascinating aspect of Bitcoin is that it allows direct peer-to-peer transactions between its users. There is no middleman involved in the transaction whatsoever, neither a financial institution nor a government agency. As such, it is practically impossible for anyone to stop a Bitcoin transaction from taking place (unless physical restraint is used on the sender).

<sup>&</sup>lt;sup>4</sup>U.S Department of Justice, Javelin Strategy and Research. Available online at http://www.statisticbrain.com/identity-theft-fraud-statistics/

Donations which are carried out through traditional payment channels such as credit cards or PayPal operate in a significantly different way. There are several third parties involved in the transaction, namely banks, credit card companies and payment processors. Because these middlemen are centralized institutions which exist physically under a government's jurisdiction, they can be forced to block donations to certain organizations or from certain people.

There are many cases in which such power is being used discriminately against non-profit or charitable organizations: freedom activist in totalitarian regimes, oppressed religious minorities, LBGT associations in countries where homosexuality is a crime, whistleblowers of government corruption, internet privacy and freedom activists, etc. Using the traditional banking system and payment methods, these organizations can be subject to account freezes, seizures or embargos.

The most famous case in which an organization has been able to avoid political censorship by using Bitcoin concerns WikiLeaks, a non-profit journalistic organization which publishes classified documents and promotes free speech. After releasing a series of classified diplomatic cables to the general public, they were subjected to what they referred to as a "banking blockade". Powerful financial institutions such as Bank of America, VISA, MasterCard, PayPal and Western Union stopped processing donations to WikiLeaks, which destroyed 95% of their revenue source.

To by-pass the blockade, WikiLeaks turned to Bitcoin as a source of funding. The experiment was extremely successful, as the organization was able to raise an incredible 3,881.67 Bitcoins as of September 2014.<sup>5</sup> In January 2014, they announced that Bitcoin and Litecoin (another cryptocurrency) had become their primary source of funding.

This feature of Bitcoin may raise some ethical questions, but in a time where financial repression and political censorship are becoming widespread and sophisticated, it certainly has many legitimate uses.

#### **ACCEPTING AND USING BITCOIN**

The drawbacks

There are two major drawbacks to accepting and using Bitcoin: the learning curve and the exposure to price volatility. It is important for you to understand these aspects of accepting Bitcoin so that you can make the right decision.

Before we discuss them in greater detail, we would once again remind the reader that **these drawbacks only affect those who decide to keep Bitcoin donations in the form of Bitcoins.** If you wish to convert Bitcoin donations automatically to your national currency by using free services that can be found here.

#### The learning curve

Bitcoin, both as a currency and a transaction network, operates in a significantly different way than national currencies and the legacy banking system. These differences are also reflected in the user experience, albeit to a lesser degree. This means that while using Bitcoin may be very similar to using an online banking portal, there are new concepts and methods to be learned.

However, it is absolutely not necessary to understand how Bitcoin works in full detail. Just like you don't need to understand the laws of thermodynamics to drive a car, you don't need to understand the math and science of cryptocurrencies (which are, indeed, quite complex).

<sup>&</sup>lt;sup>5</sup> Worth around \$1.8 million as of September 2014.

You will be able to start overcoming Bitcoin's learning curve by reading the other articles in this Handbook. In order to use Bitcoin, you will need to learn:

- 1) How to set-up and use a Bitcoin wallet
- 2) How to accept Bitcoin donations on your website
- 3) How to secure your Bitcoin balance
- 4) How to exchange Bitcoins for your national currency

Remember: Bitcoin is not a corporation and there is no official entity which provides customer service. However, the Bitcoin community is very active in producing tutorials and helping new users. It is quite easy to obtain advice, either by contacting your local Bitcoin association, reading online resources such as www.Bitcoin.org or browsing popular Bitcoin forums such as www.Bitcointalk.org or www.reddit.com/r/Bitcoin. You can find these resources, and many others, on our featured website www.givebtc.org.

#### Bitcoin's price volatility

Bitcoins are not bought from an official organization but rather from other people that own Bitcoins. The price of Bitcoin in your national currency is not determined by any group or institution: it is simply the product of supply and demand. This means the price of Bitcoin fluctuates more significantly than national currencies, whose value is controlled by central banks and government institutions.

Bitcoin remains to this day a young currency. While it is no longer in the "experimental phase" and is gradually becoming mainstream, it cannot yet be considered fully mature and stable. There is no denying it: Bitcoin's price is volatile and exposes its owners to a certain degree of risk. This is likely to change as services which protect Bitcoin owners from volatility are entering the market.

There is, however, a likelihood that the price of Bitcoin will rise over

time due to its limited supply. While it is impossible to predict the price in the future, the economics of Bitcoin make it resistant to monetary inflation – it is simply impossible to "create" more Bitcoins out of thin air in order to increase the money supply. In fact, as currencies around the world lose value due to such policies by central banks, Bitcoin becomes more attractive.

The Bitcoin system has no central point of failure and it operates in an organic and decentralized way, making it more adaptive and resistant to economic shocks. In places where capital controls and high inflation are endangering the livelihoods of its citizens, such as Argentina and Ukraine, use of Bitcoin is rising. It is not uncommon for Bitcoin users, even in well developed countries, to consider cryptocurrencies safer that their national currencies for these reasons. So while volatility can pose some risks, it is part of a process which strengthens Bitcoin over time.

#### Bitcoin's socio-economic potential

Bitcoin has become more than a technology, a currency and a transaction system. Bitcoin is also a community of people who have recognized the positive socio-economic potential of cryptocurrencies. Financial inclusion, the protection of privacy, freedom of transaction and transparency are only some of the values that are imbedded in the Bitcoin system and its community.

Peer-to-peer transactions anytime, anywhere allow us to access the most remote places of the world directly with aid and support. Organizations like Bitcoin Botswana are already taking advantage of Bitcoin's benefits and raising funds for a local orphanage and providing outreach and education about Bitcoin. Hurricane reliefs in the Philippines have been funded with Bitcoin and coordinated by members of the Bitcoin community such as our sponsor Rebit.

Bitcoin was designed as a free and open source software available for everyone, without any form of discrimination whatsoever. It is meant to give us the ability to exert more control over our wealth. By allowing instant peer-to-peer transactions from anywhere in the world and by removing the middlemen, Bitcoin is removing obstacles between individuals and allows them to engage in direct trade.

Access to financial services is a crucial step for those who wish to evade the vicious cycle of poverty. The world's 2.5 billion unbanked individuals now have the potential to by-pass the obstacles that once restricted them from having access to banking services. Bitcoin offers financial independence, freedom from fraud and empowerment. It has been often referred to as the "gift that keeps on giving" because its long-term value projected increases.

Bitcoin also has interesting philosophical implications. In liberal thought, it is understood that individuals possess rights that are inherent to their very existence, as opposed to being "granted" by governments. Bitcoin is the first practical implementation of this concept when it comes to property rights: digital assets are stored as

entries in a decentralized ledger and only the legitimate owner has access to these assets, without relying on any third party such as a bank. Inside the Bitcoin network, this right is inalienable and is self-enforced through encryption techniques. Freedom of transaction is also absolute and irrevocable since, within the network, it is simply impossible to stop a transaction from taking place.

Because of its possibility to disrupt the global financial landscape and existing socio-economic structures, Bitcoin is more than just a new payment method: it is a social, political and economic game changer. On these grounds alone, those who seek positive change in this world cannot afford to dismiss Bitcoin and cryptocurrencies as mere curiosities.

"Bitcoin is removing obstacles between individuals and allows them to engage in direct trade"

# HOW TO ACCEPT BITCOIN?

#### **Emily Vaughn**

Events Marketing Manager, BitPay

There are a variety of ways for charities and non-profit organizations to accept Bitcoin donations. For most, once the question of "why" is answered, adopting Bitcoin becomes a matter of "how."

In order for an organization to determine how they wish to accept Bitcoin, they must consider the most common and effective methods for collecting donations. Generally, that would be in-person at fundraising events or online through the organization's webpage – both of which are possible with Bitcoin. Once the organization has decided how they will accept Bitcoin, they should decide which services they need to use to maximize Bitcoin payments and increase revenue.

#### **DIRECT V.S. INDIRECT DONATIONS**

The first thing you need to know about how to accept Bitcoin donations is that there are two ways to receive those funds: directly or indirectly.

"Directly" refers to peer-to-peer transactions in which the donor sends Bitcoins directly to the organization's Bitcoin wallet, transferring the Bitcoins instantly without going through a third-party. This is a "standard" Bitcoin transaction. By using this method you have less flexibility and functionality in the processing of the donations. For instance, it may be difficult to provide customized invoices as a donation receipt and you will not be able to automatically convert

the donations, or a portion of the donations, into national currencies. This method also requires you to further educate yourself about how to use Bitcoin more broadly, which you can start doing by reading the rest of this Handbook.

You can also accept Bitcoin donations "indirectly", which refers to using a payment processor to convert the Bitcoins into local currency or simply using their invoicing or billing service to simplify payments. This is a service provided by businesses called Bitcoin payment processors. Not only are there a large number of companies that process charitable Bitcoin donations for free, but there are organizations that create extra incentives and special services for charities and non-profits. When deciding to adopt Bitcoin, not-for-profit organizations can take the proverbial leap by utilizing these special services and resources provided by payment processors, online services, and other Bitcoin-backed organizations.

For more information on these services, please visit the helpful resources section of www.givebtc.org – you will find a list of such services and other resources that you can take advantage of. The underlying principle for each of these providers is that Bitcoin is the purest way to transfer value, and selfless organizations deserve every bit of their donations, pun intended.

Regardless of whether you wish to accept Bitcoin donations directly or have part (or all) of that donation converted to national currencies, the experience of the Bitcoin donor will remain essentially the same.

#### **ACCEPTING BITCOIN DONATIONS DIRECTLY**

The first step to accepting Bitcoins directly is to procure yourself a Bitcoin wallet. There are many different types of Bitcoin wallets, which are interfaces through which you can easily have access to your funds and interact with others on the Bitcoin network. You can download a wallet in the form of an application on your phone, as a software on your computer or as a browser extension. Some Bitcoin wallets are also simply a web page on the Internet. You can find a lot of information regarding the different Bitcoin wallets at: Bitcoin.org/en/choose-your-wallet or in the next section of this Handbook.

When you obtain a Bitcoin wallet, it will generate a public Bitcoin address and a matching private key associated to the wallet. To be able to make a donation to your organization, a donor only needs to know your Bitcoin address. The private key, which you should never reveal to an untrustworthy person, gives you access to the funds. You can think of them as your email address and your email password: you share your email address with others to receive mail and you use your password to view or send email.

A Bitcoin address consists of a series of numbers and letters which looks like this: 1A3zbcpxNpMysaXvyotTXcftCpLMfRK6TZ. Your wallet will also normally generate a QR code which is the graphical representation of that address. Once you have your Bitcoin address, all you have to do is place that address on your organization's website and on your promotional material, both in its alphanumerical form and in the form of a QR code (see Figure 1). You can also find some donation buttons and widgets which your web developer can insert on your website – these can have a more stylish look which matches your website's design.

"To be able to make a donation to your organization, a donor only needs to know your Bitcoin address." Knowing what your Bitcoin address is, the donor now has the possibility to send you some Bitcoins. Regardless of what type of Bitcoin wallet he is using, he will be able to very simply:

- Scan the QR code representing your Bitcoin address by using an application on his mobile device. He will instantly obtain your address (the long string of letters and numbers) without needing to manually insert it in his mobile device. From there, all he has to do is simply choose the amount he wants to donate and send the funds.
- Copy the Bitcoin address (the string of numbers and letters)
  from your website and paste it in the "recipient" section of
  his Bitcoin wallet. A donor will do this if the does not have
  the ability to scan a QR code, for example if the donor does
  not use a Bitcoin wallet installed on his smart phone or when
  the sender is in a low-lit setting

Figure 1 – Accepting Bitcoin donations directly on your website (example)

#### DONATE

Our Donation address:



1A3zbcpxNpMysaXvyotTXcftCpLMfRK6TZ

It's that simple: the Bitcoin donations will simply be sent to your Bitcoin address. You can then access those funds through your Bitcoin wallet which, in most cases, will look similar to an online banking portal.

### ACCEPTING BITCOIN DONATIONS WITH A PAYMENT PROCESSOR

Payment processors that generate invoices or payment pages for donating Bitcoin usually incorporate all methods for collecting Bitcoins to ensure that any sender, regardless of their Bitcoin wallet configuration, can send Bitcoins to the recipient.

The main reasons why your organization would prefer this method to accepting Bitcoin donations directly are:

- You streamline the process, providing customized invoices and a similar donation experience for all users.
- You can choose to automatically convert a portion or all of the Bitcoin donation into your national currency, which means that you never have to store or use Bitcoins.
- Payment processors usually provide customer support.

Payment processors are able to accommodate the different types of wallets that the donor would use. Generally speaking, a Bitcoin payment processor will allow the donor to select the amount of the donation in his national currency. Once the donor has selected how much he wants to give, the three following options will be made available to him:

- The payment processor will generate a Bitcoin address at which the donor sends the funds by scanning the black and white QR code with their smart phone. This method requires a smart phone or tablet and is the most common way to send Bitcoin directly.
- The payment processor will generate a Bitcoin address in

its alpha-numerical form (the string of letters and numbers). The donor can simply copy and paste the recipient address into his Bitcoin wallet. This method still requires an internet connection and a device that is capable of sending Bitcoins.

• The payment processor will enable a "Click-to-Pay URI" payment, which is convenient for users who have a web wallet integrated on their browser. When the sender clicks the Bitcoin payment option and elects to send the transaction, the funds transfer automatically from their installed wallet. This method requires the donor to have a web wallet integrated with the particular checkout service and cannot always be facilitated when using direct payments.

## ACCEPT BITCOIN DONATIONS TODAY - FOR FREE!

Not every organization can pay their bills and cover costs with Bitcoin. That's why many Bitcoin payment processors offer free processing for non-profits, meaning that they allow non-profits to convert Bitcoins into national currencies without charging a conversion fee. While holding on to Bitcoins may prove beneficial as a long term investment, in the short run, settling Bitcoins to local currencies is necessary for organizations with thin margins. Using a payment processor for your charity's Bitcoin donations has many benefits and requires very little technical expertise.

Each service provider has a different sign-up process and offers different services. Be sure to evaluate all of your options before making a commitment. Here are some questions you should be asking:

- Many payment processors eliminate processing fees for non-profits, making the decision to accept Bitcoin free for your organization. Is your payment processor free?
- In most countries, Bitcoin payments can be settled for local currency and deposited to your bank account automatically,

without you ever having to find a buyer for your Bitcoin. Does your Bitcoin processor offer bank settlements in your local currency?

- It's likely that your supporters will use a variety of wallet services to send and receive Bitcoin, so some payment processors go the extra mile to make their service compatible with most Bitcoin wallets. Is your checkout process seamless and easy for every donation?
- Adding Bitcoin as an accepted form of payment to your website should happen at the click of a button. Does your payment processor equip you with all the tools you need to begin accepting Bitcoin today?
- If you wish to accept Bitcoin in-person, your payment processor should have a mobile checkout solution for payments on-the-go. Is your payment processor as flexible as you are?

These are the industry standards for providing great service to non-profits and charities, and these services separate the good from the bad when it comes to handling your donations.

Payment processors are not the only service providers that enhance the experience of charitable giving. A number of companies have emerged to encourage more non-profit organizations to accept Bitcoin donations and embrace the positive force of transformative technology. With their success, more will join the ranks to enable groups like yours to increase awareness.

Safello is a new online solution for charity fundraising. Safello is a Swedish Bitcoin exchange that now offers non-profit organizations to set fundraising goals on their pages and receive donations directly through the exchange, with the target number being updated in real-time with each donation. Their goal is to provide charities of any size with a free and easy method for reaching a global audience.

"A number of companies have emerged to encourage more non-profit organizations to accept Bitcoin donations and embrace the positive force of transformative technology"

Bitcoin 100 is just one example of a Bitcoin-backed organization offering incentives for non-profits. Regardless of how long the organization has been in place, if they are new to accepting Bitcoin, Bitcoin 100 has pledged to donate \$1000 to each non-profit that proudly displays "Bitcoin Accepted" on their website. All that is required is that the organization be successfully accepting Bitcoin for donations and displaying it as an option on their homepage.

The Bitcoin community has come forth with the tools and resources to empower people who want to build a better world. As Bitcoin has grown, its users have experienced the good it can do and are passionate about its long-term impact on poverty and individual ownership. Accepting Bitcoin donations is just another way of telling your donors that you are here and that you are willing to accept their donation, no matter its delivery method.

# **EXPERTS' ADVICE**

- **■** BITCOIN SECURITY BEST PRACTICES
- BITCOIN LEGAL 101 FOR CHARITIES
- ► BITCOIN ASSET ALLOCATION & FINANCIAL REPORTING

# BITCOIN SECURITY BEST PRACTICES

One of Bitcoin's most interesting features is that it allows its users a much greater degree of liberty and flexibility over their funds, which can be held as a store of value or transferred as payment without relying on third-party institutions such as banks. This entails that unlike banks or other financial institutions, the security of Bitcoin funds is primarily the responsibility of its owners. Limiting outsiders' control over your funds reduces risks associated with trusting 3rd party institutions but increases risks associated with theft and cybercrime.

Don't let this be a deterrent to using Bitcoin: with a few good tips, you'll learn how to avoid these risks and find the security solution that will give you peace of mind.

Please note that the following security considerations only apply if you decide to keep digital currency donations without having them automatically converted to national currencies.

#### PRINCIPLES OF INFORMATION SECURITY

Information security, the practice of defending one's data from unauthorized access, can be conceived as a compromise between three competing goals commonly referred to as the "CIA triangle":

- Confidentiality
- Integrity
- Availability

As you increase one point on this triangle (for example, making a copy of your keys to increase integrity), you will decrease one or both of the others (such as the confidentiality, since now the key can be stolen from two places instead of one). The actual balance of these three goals is up to your organization.

I personally recommend strengthening both the confidentiality and integrity, and weakening the availability for the majority of your coins. This will make it a little more difficult to spend your coins, but will give you peace of mind that they are kept safely beyond the reach of cyber criminals.

## IS BITCOIN RISKIER THAN OTHER ALTERNATIVES?

As in all realms of money and payment, hoax, scams and fraud exist also in the Bitcoin ecosystem. However, they are not more numerous or dangerous than the ones conducted with other traditional currencies and payment methods.

You may have heard numerous stories about Bitcoins being lost or stolen and may be fearful to adopt this technology because of it. While these instances have certainly been disproportionally present in Bitcoin's news coverage, they should not be used as a measure of Bitcoin's inherent security features. Indeed, in many of these cases, security breaches were the result of users sharing access to their funds with third-parties whom they thought were trustworthy.

The widely cited Mt.Gox case is useful to illustrate the difference between risks associated to using Bitcoin and risks associated with particular Bitcoin businesses. Bitcoin is a technology that relies on a network similar to the Internet. MtGox was a Bitcoin company like Google is an Internet company. In the world of Bitcoin -like on the Internet as a whole-, you should always do your research and make sure you are using trustworthy services.

"with a few good tips, you'll learn how to avoid these risks and find the security solution that will give you peace of mind"

It is thus important to differentiate between risks inherent to using Bitcoin, (which does not require any form of trust), and risks associated with using certain Bitcoin services (which may require a form of trust from their users).

#### **HOW TO SECURE YOUR BITCOINS**

#### Review of the alternatives

Bitcoin security is achieved first and foremost using the features provided by different Bitcoin wallet services. There are dozens of Bitcoin wallets from a variety of software vendors, each having their own sets of strengths, weaknesses, and features. Choosing the right wallet for your organization may seem difficult at first, but once you understand the different types of wallets available, it will be much easier to choose the one whose features align with your organization's needs.

Wallets can be divided into two categories: hot and cold. The difference between these is the location where the private keys are stored. If the keys are stored on a computer connected to a network (like a laptop, desktop, or mobile device) the wallet is considered "hot" since the funds are within reach for you to use, but also for malware and cyber-criminals to steal.

If the private keys are stored on an offline device (like a laptop with disabled networking components, or a piece of paper) then it is considered "cold" since there is no way to gain access to the keys without having them physically in your hands.

Within these two categories of Bitcoin wallets there are other subcategories. These include web wallets, desktop wallets installed on your computer, hierarchical deterministic ("HD") wallets, multiple-signature ("multi-sig") wallets, light wallets, paper wallets, and wallets that require two-factor authentication ("2FA").

These wallet characteristics are not mutually exclusive. For example, you can have a web wallet that uses the multi-sig system or two-factor authentication. You'll find that some of the recommended wallets appear in more than one category below.

## Web wallets vs. desktop wallets vs. mobile wallet

A web wallet is a Bitcoin wallet hosted within your web browser, just like Gmail is a web-based email account. While web wallets offer the convenience of accessing your funds easily from anywhere in the world (i.e. increased availability), they also make those funds more accessible to malware and cyber criminals.

Despite these concerns, web wallets are a great and easy way to hold a small portion of funds for easy access, much like the way you walk around with some cash in your purse or pocket. Although you can be mugged and have your cash stolen, the majority of your funds are in a more secure location (like your bank or a cold wallet). Examples of web wallets include Blockchain.info, Coinbase, and Coinkite.

Desktop wallets are software downloaded on your computer. They can allow for more security and control over your funds as your private keys will be stored on your computer. However, they are slightly more difficult to install and use. You should keep a backup of your wallet in a safe location in case your computer runs into technical difficulties. Examples include Electrum, Hive and Green Address.

Mobile wallets are installed on smart phones or tablets. They are great for physical purchases with Bitcoin since you can use your device's camera to easily scan QR codes and send payments. They

are ideal for carrying around small amounts of Bitcoins. You must be careful to keep a backup of your wallet and have security features such as a PIN enabled in case your device is lost, stolen or runs into technical difficulties.

#### **Desktop wallets: light vs. heavy wallets**

Light wallets are Bitcoin wallets that don't require the full Bitcoin blockchain to function. Heavy wallets need access to the 20GB+ blockchain that includes every Bitcoin transaction ever sent by anyone in the world since the beginning of the network. While this information can be interesting, it can also cause delays if you haven't launched a heavy wallet in a few days or weeks as it will need to download hundreds of megabytes before being able to be used.

Light wallets either make use of a blockchain server that hosts the chain on your behalf, or a pruned copy of the blockchain that only includes specific transactions relevant to your own keys.

Light wallets are the norm for non-expert Bitcoin users and, for a non-profit organization, there is little advantage in using a heavy Bitcoin wallet. Examples of heavy wallets include Armory and Bitcoin QT. All other wallets mentioned in this article are light wallets.

#### **Paper wallets**

A paper wallet is a piece of paper (or any physical object) with a Bitcoin private key printed on it. The biggest advantage of this is that paper can't be hacked like devices can. The private keys can also be encrypted with a password so that even if someone finds your paper wallet they will not be able to use it without the password. If you use these, remember to store your password in a different location so that the paper is useless to thieves.

#### **ADVANCED WALLET CHARACTERISTICS**

#### **Hierarchical Deterministic wallets**

Hierarchical Deterministic wallets (HD wallets) generate all of their keys and addresses from a single master seed and master public key. Since every one of those keys can be calculated from the seed there is no need to back up each key; you only need to back up the master seed once. Having a secure back-up of your seed protects you from accidental loss of your Bitcoins.

This dramatically increases the confidentiality and integrity of your funds since you won't have hundreds of backups to create and manage. Examples of HD wallets include Electrum, Armory (heavy wallet), Coinkite and Mycelium.

#### Multiple-signature wallets

Multiple-signature wallets allow you to store your funds in a way that requires two (or more) keys to spend funds instead of a single key. For instance, you can create a multi-signature wallet in which there are three keys and the Bitcoins can be accessed if permission is granted by two of the three key holders. This is a great way to distribute the signing authority for your funds to multiple people (for instance board members or employees) who must agree every time funds are to be spent from your wallet.

While this reduces the risk of a single employee stealing your funds (either knowingly via theft or unknowingly through accidentally-installed malware), it comes at the price of increased complexity and decreased availability of funds. Every holder of a key must be trained in how to create unsigned transactions, distribute it to the key-holders, and apply their signatures to it so that it will be successfully relayed to the Bitcoin network. Examples of wallets that have multi-sig functionality include mSigna, Electrum, Armory, and GreenAddress.

#### Two-factor authentication

Two-factor authentication ("2FA") is a feature offered by many of the wallet types listed above that requires two types of authentication before allowing you to spend your funds.

Wallets that use 2FA will use another piece of software (like Google Authenticator), an SMS text message, or even a phone call to confirm access to your funds. This feature dramatically increases the security of your funds in exchange for the inconvenience of typing in a set of numbers given to you through another channel.

As a security professional I will always recommend the activation of 2FA on any wallet that supports it, although I know that many people refuse to use it as they harbor a strong distaste for the inconvenience. Like the other points discussed in this section, the specific blend of confidentiality, integrity, and availability chosen by your organization depends on your requirements. Wallets that have 2FA features include most web wallets such as Blockchain.info, GreenAddress, and Coinkite.

#### **EXPERT RECOMMENDATIONS**

Now that the different types of wallets have been covered, along with the most important security features, here are a few recommendations to help your organization identify the Bitcoin wallet solution that works best for you:

Manage at least two wallets: one for the majority of your Bitcoin as a savings account (a "cold" wallet) and one for regular use as a spending account (a "hot" wallet). You can decide how much Bitcoin should reside in each wallet per your organization's requirements. Feel free to choose different wallet software for each of these wallets too. Don't worry about choosing the "wrong" wallet. If you find the software you've chosen isn't meeting your needs, you can always create a new wallet with another software and move your funds there later.

Keep as many of your Bitcoins stored offline as possible. Remember, when your keys are on a device that can connect to the Internet, a cyber-attacker or piece of malware can use the Internet to connect to your device and copy your keys. I recommend using an old laptop that has had its wireless module physically removed, or a paper wallet.

Develop policies (or amend your existing policies) to protect your organization from the various types of loss associated with Bitcoin. Fire and floods can destroy devices and paper wallets, and the unexpected death of an employee can leave your funds inaccessible if they were the only one who knew a password. Be sure to make backups of your keys, to store them securely, and to ensure there are enough personnel who know the necessary passwords.

If a large portion of your funds are kept in Bitcoin, you may wish to consider enlisting the assistance of a security firm that specializes in Bitcoin security to assist with your organization's policies and training to ensure the security of your Bitcoin.

"Don't worry about choosing the «wrong» wallet. If you find the software you've chosen isn't meeting your needs, you can always create a new wallet with another software and move your funds here later."

#### CONCLUSION

Following simple security principles and practices can make Bitcoin the safest alternative for you to store your funds. The more you get to know Bitcoin and its network, the more you'll be able to compare it to other forms of security mechanism used elsewhere on the Internet. I am confident that you will eventually see how Bitcoin's cryptography system is the most secure that exist at the moment.

If you're already transmitting personal information to the government or using online banking systems, you're not at more risk when you do this then you would be using Bitcoin. As you familiarize yourself with Bitcoin, you'll realize that the security of Bitcoin assets can all be summed up in one concept: the protection of your private keys. This can be done easily with just a few good tips and security habits that you should already be using online for all your other information transmission, whether it is online banking or the simple act of logging in to your e-mail account.

# BITCOIN LEGAL 101 FOR CHARITIES

The primary upside of Bitcoin for charities is its ease of transfer. It is normal for a charity, usually operating on a shoe-string budget, to be wary of new means of payment and new forms of value, such as digital currency. In this short piece we will clarify some common misconceptions regarding Bitcoin and the law, review some of the basic legal concerns for Bitcoin and discuss some practical considerations for accepting donations in Bitcoin. The focus of this section is Canada but the underlying logic can apply to other jurisdictions.

Before getting started, please note the following. The state of the law with respect to the Bitcoin protocol, Bitcoins, cryptocurrency as well as businesses supported by this new technology is tenuous. The purpose of this document is to provide information in order to make a preliminary assessment of the risk factors to be aware of as a charity whose operations are associated with Bitcoin or the Bitcoin protocol in Canada.

## DEMYSTIFYING POPULAR MISCONCEPTIONS ABOUT LAW OF BITCOIN

The cacophony of misinformation circulating about Bitcoin has led many to adopt the false impression that it "illegal". Bitcoin is not illegal. At least not in Canada, the United States, or Europe for that matter. Not only is Bitcoin not "illegal", people transacting with it are

"Not only is Bitcoin not "illegal", people transacting with it are subject to the law. This means that, by and large, the use of Bitcoin is already regulated."

subject to the law. This means that, by and large, the use of Bitcoin is already regulated.

Because of the novelty of Bitcoin, the lack of previous comparable alternatives and its multiple applications, its exact nature is difficult to define. While Bitcoin can be used to buy things, it differs from conventional money. Bitcoin is based purely on mathematics, its supply is limited and its rate of production is pre-determined. Perhaps most importantly from a legal perspective, it is not controlled by any government. Bitcoin is decentralized, it is not a legal entity, it cannot go bankrupt or be sued. It is an open-source computer technology, comparable in concept to the Internet. It is governed by code, and it is continually developed and built upon by a community of users and developers.

Although, perhaps in economics, Bitcoin may satisfy the qualities of money, it is difficult to qualify Bitcoin as "money" under Canadian law.

The Currency Act, which stipulates that contracts and transactions "for money" or "relating to money" or "involving the payment [...] of money" shall be carried out in the currency of Canada or another country. This means that when a contract involves the payment of money, "money" means Canadian dollars, the currency of another country, or the currency of a group of countries, such as the Euro. A debtor cannot unilaterally decide to pay for something that calls

<sup>&</sup>lt;sup>1</sup> Currency Act, C-52, Article 13.

for payment in money with digital currency – in other words, the debtor must have the consent of the creditor in order for the debtor to acquit his obligation with Bitcoin or digital currency.

"While the technology itself cannot be shut down or subject to legal oversight, the people and entities transacting in Bitcoin and the services and functions provided through the technology certainly can."

## ANTI-MONEY LAUNDERING LAWS AND BITCOIN

Bitcoin technology is distinct from the programs that operate on it. While the technology itself cannot be shut down or subject to legal oversight, the people and entities transacting in Bitcoin and the services and functions provided through the technology certainly can. To a large extent they already are. When looking at how the law applies to Bitcoin, legal practitioners and law-makers should contemplate the function or service performed rather than the technology, or medium, used to execute it.

As a result of recent legislative amendment in Canada, businesses dealing in digital currency will soon be subject to the Proceeds of Crime (Money Laundering) and Terrorist Financing Act (PCMLTF), requiring respect of compliance and due diligence obligations. The PCMLTF is the legislative basis for Canada's anti-money laundering and terrorist financing regime. The Act already regulates a number of financial and non-financial entities, from banks and securities dealers to casinos and real estate agents.

The PCMLTF already regulates money services businesses, which includes foreign exchange dealers, businesses that transmit funds,

and issuers and redeemers of traveler's cheques. The activities of digital currency businesses that are similar to money services businesses, such as exchanges, will soon have to play by the same rules as their fiat counter parts.

As of the date of this writing, we continue to wait for corresponding changes in the regulations that will define a "business dealing in virtual currency". We know from Senate hearings that the amendments will cover digital currency exchanges but **not individuals or businesses that accept Bitcoin as payment or donations.** 

## MOST TRANSACTIONS ARE TAXABLE, INCLUDING THOSE INVOLVING BITCOIN

Tax laws vary from country to country and Bitcoin donations may be considered a donation in property. Transactions with Bitcoin are taxable in Canada, and are treated, perhaps unnecessarily, as barter transactions. When traded as a commodity, any resulting gains can be treated as taxable income or capital for the taxpayer.

The problem with trying to qualify cryptocurrency as either money, a commodity or a security is that iterations of the technology can be used as all of these things, and more. A legal definition of cryptocurrency may be neither feasible nor desirable, particularly where doing so might prejudice how the technology will be used.

The Canada Revenue Agency (the "CRA") has published technical interpretations on Bitcoin that provide that transactions conducted with Bitcoin would be treated as barter transactions for income tax purposes. This means that each party is considered to transact based on the fair market value of the consideration they paid. The circumstances will determine whether a transaction is on a capital or an income account. The CRA treats Bitcoin as property or a commodity and not as money.

The CRA also indirectly references the consequences of loss of Bitcoins from theft when they are acquired in the context of business activities. A loss of trading assets, such as inventory, which would include mined Bitcoins, or cash, through theft, defalcation or

embezzlement is normally deductible in computing income from a business if such losses are an inherent risk of carrying on the business and the loss is reasonably incidental to the normal income-earning activities of the business.9

In the context of the sale of goods or services paid for in Bitcoins, the merchant would be required to charge the goods and services tax (GST) based on the fair market value of the goods or services sold. However, it remains to be determined whether Bitcoins themselves, when they are acquired, would be subject to GST or whether they would constitute a "financial service" and not be subject to GST. Money is considered a "financial service" and is not subject to GST.

## ACCEPTING BITCOIN DONATIONS - WHAT YOU NEED TO KNOW

#### Being a registered charity

In Canada, organizations that operate for certain purposes can obtain the status of a registered charity from the Canadian government. Many other country provide similar legal status for charities that allow these organization to benefit from favorable or exempt tax treatment, and enjoy other legal benefits.

"There are a number of legislative and regulatory obligations a registered charity must meet for the various levels of government (federal, provincial, territorial, and municipal). A registered charity also has obligations to the recipients of its charitable activities, to its volunteers, to its donors, and to the general public."<sup>3</sup>

#### In Canada, for example:

- Registration allows a charity to issue official donation receipts for gifts it receives. These receipts can be used to reduce the income tax payable of an individual donor or the taxable income of a corporate donor.
- Once registered, a charity is exempt from paying income tax under Part I of the Income Tax Act.
- Registered charities are eligible to receive gifts from other registered charities, such as foundations.
- Registration provides increased credibility in the community, since registered charities must follow certain rules and guidelines in order to maintain their registration.
- Many goods and services provided by registered charities are exempt from goods and services tax/harmonized sales tax (GST/HST). Also, in many situations, registered charities can claim a partial rebate for the GST/HST they pay.

A receipt is simply an acknowledgement that a donation for a certain amount was made to a charity.<sup>4</sup> If you are a registered charity in Canada, you have the added advantage of being permitted to give "official tax receipts" which the charity donor can then use to reduce the amount of income tax they will owe.<sup>5</sup> These official receipts have strict rules as to the information that must be contained on them. This rule applies only to gift, within the meaning of the income tax act, to a registered charity. Gifts of property are eligible for official donation receipts, this includes cash, computers or equipment.<sup>6</sup>

<sup>&</sup>lt;sup>2</sup> IT-185R – Losses from theft, defalcation or embezzlement, Canada Revenue Agency (Interpretation Bulletin).

<sup>&</sup>lt;sup>3</sup> http://www.cra-arc.gc.ca/chrts-gvng/chrts/prtng/gfts/whts-eng.html

<sup>4 5</sup> http://www.educaloi.gc.ca/en/capsules/registered-charities-donations-and-receipts

<sup>6</sup> http://www.cra-arc.gc.ca/chrts-gvng/chrts/prtng/gfts/whts-eng.html

One of the major advantages of having a registered charity is being able to issue charity receipts to the donor. In order to issue a receipt you need to know the value of what was given. Generally, to determine the value to issue with a receipt for a donation of something other than legal tender, appraisals must be undertaken by independent third-parties who have expertise in valuing what is being donated.

#### **BITCOIN AS "GIFTS IN KIND"**

The donation of a Bitcoin may be considered to be the donation of a "gift in kind". These include many different types of property, including a "right of any kind whatever" but does not include services. Bitcoin confers purchasing power, you can use it to buy goods and services and you can use it to send value over the Internet. Bitcoin could be classified as a gift in kind because it transfers the right to purchase goods and services where Bitcoin is accepted in payment.

There are plenty of ways in which Bitcoin differs from gift certificates. Gift certificates are created and distributed by a central issuer, usually a business. However, for charity tax law purposes, Bitcoin shares commonalities with gift certificates, particularly in how they are used. The donor can receive a tax receipt based on the fair market value of the certificate. There are different rules applicable to obtaining a charity receipt depending on whether gift certificate is given by the issuer of the certificate or a non-issuer. With Bitcoin, this is distinct, because there is not issuer of Bitcoin.

"for charity tax law purposes, Bitcoin shares commonalities with gift certificates, particularly in how they are used."

#### The "fair market value" of Bitcoins

The fair market value of a gift in kind is extremely important for determining the tax implications for the donor, namely the tax credit. The CRA's interpretation bulletin on gifts in kind sets out that the fair market value of a gift in kind is determined as of the date of the donation, which is the date on which beneficial ownership is transferred from the donor to the recipient. This amount must be determined before an amount can be recorded on a receipt for tax purposes.<sup>8</sup> The person who determines the fair market value of the property must be competent and qualified to evaluate the particular property being transferred by way of a gift.<sup>9</sup>

The difficulty in determining the fair market value for Bitcoins may make it difficult for a registered charity to give an official tax receipt. The ability to issue official tax receipts is often seen as the primary virtue of a registered charity, because it encourages donations from people who can then deduct it from their income tax.

As registered charities in Canada will know, issuing official tax receipts comes with great advantages but also great responsibilities. There is a lot of administrative work surrounding the issuance of such receipts.

<sup>&</sup>lt;sup>7</sup> Canada Revenue Agency, Registering a Charity for Income Tax Purposes. http://www.cra-arc.gc.ca/E/pub/tg/t4063/t4063-13e.pdf

<sup>&</sup>lt;sup>8</sup> Canada Revenue Agency, Interpretation Bulletin - IT-297R2. Gifts in Kind to Charity and Others. March 21, 1990

<sup>&</sup>lt;sup>9</sup> Canada Revenue Agency, Interpretation Bulletin - IT-297R2. Gifts in Kind to Charity and Others. March 21, 1990.

There is a legal requirements to issue official receipts for donations. So accepting donations in Bitcoin can probably be done more easily when the donor doesn't require a official tax receipt. Many charities only issue receipts for donations above a certain threshold because the administrative work is so cumbersome.

When issuing a receipt for a gift-in-kind, the charity must determine its dollar value, by calculating the "fair market value" ("FMV"). This is similar how purchases of goods and services paid for in Bitcoin are taxed. The FMV is usually defined as the highest price the thing would bring in if it were sold by a knowledgeable seller to a knowledgeable buyer in the regular marketplace and the seller and buyer were acting independently of each other. Determining the FMV of Bitcoin may be done by taking the average price found on the most reputable Bitcoin exchanges.

In some cases the value of the receipt will not be the FMV on the date of the donation. Under certain conditions, a receipt issued for a non-cash gift must be issued for the lesser of the gift's **fair market value** and its cost to the donor (or in the case of capital property, its adjusted cost base) immediately before the gift is made¹º. In the case of Bitcoin, receipt issued for a donation in Bitcoin meeting these conditions would be valued based on the date it was acquired or the day it was donated, whichever is the lesser value.

Please refer to the **next article** for a more detailed explanation of financial reporting when it comes to Bitcoin donations.

<sup>&</sup>lt;sup>10</sup> http://www.cra-arc.gc.ca/chrts-gvng/chrts/prtng/rcpts/dmdfmv-eng.html

# EXPERTS' ADVICE

# BITCOIN ASSET ALLOCATION & FINANCIAL REPORTING

Now that the ease and benefits of accepting Bitcoin donations have been established, it's important to take a look at the associated financial reporting and asset allocation implications. In this section, I'll explain how to deal with the decisions that non-profit organizations (NPOs) will face once they decide to accept Bitcoin donations.

### **INVESTMENT OBJECTIVES**

When NPOs raise money, it is expected that the funds will be used to support programs that will help the organization achieve its goals. In order to do this effectively, every NPO should have clearly defined investment objectives that the Board of Directors believes will best support the organization's mission. These objectives should at the bare minimum include how much of the organization's endowment should be used for expenses and how much is to be reinvested, the level of risk the Board believes they can tolerate, an investment horizon that dictates holding periods for different investments and a definition of what types of investments are acceptable.

"Should all of the Bitcoins be kept? Should they be converted to dollars immediately? Perhaps a combination of the two strategies?"

### **ASSET ALLOCATION**

Once an NPO begins to accept Bitcoin donations, the Board must decide what to do with them. Should all of the Bitcoins be kept? Should they be converted to dollars immediately? Perhaps a combination of the two strategies? To answer these questions, an organization should turn to its investment objectives. After analyzing these objectives, an organization will determine which of the following risk profiles most accurately reflects its objectives:

- Risk-averse // Conservative
- Risk-neutral // Moderate
- Risk-seeking // Aggressive

Since Bitcoin is still a developing technology, its value tends to fluctuate quite frequently and as such, it is a highly speculative and therefore high-risk investment. As a result, not every organization will have the same policies regarding its Bitcoin donations – in some cases, it may be preferable for an organization to convert its Bitcoin donations to dollars immediately in order to avoid undue exposure to volatility. Services offered by Bitcoin payment processors such as Coinbase and BitPay allow for instant conversion of donations (a free service for non-profit organizations).

Based on the aforementioned risk profiles, I've come up with a recommended allocation of Bitcoin donations:

Risk Profile	Donations Converted to Dollars	Donations Held in Bitcoin
Risk-averse // Conservative	100%	0%
Risk-neutral // Moderate	50%	50%
Risk-seeking // Aggressive	0%	100%

In the case of risk-averse organizations, converting all Bitcoin donations into dollars immediately upon receipt will result in no foreign exchange risk. However, this also means that the organization will have no Bitcoins. This type of allocation strategy is ideal for those who would like to add Bitcoin donations as an additional revenue stream that makes their organization internationally accessible.

Risk-neutral organizations are advised to keep half their donations in Bitcoin and convert the rest into dollars. This allocation strategy will allow them to maintain liquidity for everyday expenses by having some dollars, but additionally creates a position with some exposure to Bitcoin.

Risk-seeking organizations are encouraged to keep all of their donations in Bitcoin, in order to benefit from any upswing in value over time. A notable example for this type of organization is the BitGive Foundation, which holds all of its Bitcoin donations.

By deciding to keep some Bitcoins, risk-neutral and risk-seeking organizations will then become participants in the Bitcoin economy and benefit from all of its advantages as a global payment system. They can decide to sell their Bitcoins at a later date or they can spend them at one of the thousands of merchants that accept Bitcoin, some of which even offer discounts for Bitcoin users due to the low processing fees as compared to credit cards.

### **FINANCIAL REPORTING**

Once decided on a Bitcoin allocation strategy that is aligned with the organization's investment objectives, NPOs will also need to be aware of the particularities associated with accounting for Bitcoins. It's important to note that organizations deciding to convert all their Bitcoins to dollars immediately upon receipt won't have to make any changes to their financial reporting systems. Donations received in Bitcoin are recorded the same way as donations received in dollars, since ultimately, the donations are actually being received in dollars. Organizations that decide to keep some Bitcoins will have a little bit of extra work to do, but the process is fairly simple.

For financial reporting purposes, Bitcoins are basically treated as a foreign currency. While there is no accounting software that officially supports Bitcoin transactions at the publication of this document, many popular applications do support the addition of foreign currencies. The first step for an organization that accepts Bitcoin donations would be to create a new foreign currency/asset account in its Chart of Accounts for its Bitcoins. For large international NPOs whom already receive donations in multiple national currencies, this will probably be a familiar process.

After the creation of a proper account dedicated to tracking the inflows and outflows of Bitcoins, the Controller or Treasurer must make an important decision regarding the exchange rate between the organization's local currency (USD, CAD, GBP, etc.) and Bitcoin. At the time of Bitcoin transaction, the exchange rate between Bitcoin and the NPOs local currency must be recorded. Most government authorities have asserted that the source of this rate is up to the organization, however the application of the rate must be consistent. As such, it must be decided where the organization will pull the exchange rate between BTC and their local currency at the time of each transaction. Popular choices include:

- Bitcoin Average
- Preev Simple Bitcoin Converter
- Winklevoss Index

Once an account has been setup in the accounting system to track Bitcoin transactions and the exchange rate source has been selected, the organization is prepared to record its Bitcoin transactions.

How an NPO records the details of each transaction will depend on the rules set forth by the relevant authorities in their jurisdiction. Fortunately, most taxation authorities have issued guidance related for Bitcoin transactions. There are three types of Bitcoin transactions that an NPO will be engaged in:

### 1. Acquisition of Bitcoins (i.e. donations)

When Bitcoins are acquired by an NPO, typically as donations, they must be recorded as both an asset and as revenue. These Bitcoins will be recorded at their cost in dollars, which is calculated using the exchange rate mentioned earlier.

## 2. Disposition of Bitcoins (ie: selling them, spending them)

Sometimes, an organization will choose to sell or spend its Bitcoins in order to pay off expenses, acquire assets or partake in other activities to fulfill its mission. In either case, the organization's balance of Bitcoins will be decreasing. However, in most jurisdictions there is a taxable event each time a Bitcoin is sold or spent. That's because when Bitcoins are disposed of, they may not be worth what they were at the time they were donated. If they are worth more, there will be a capital gain, otherwise there will be a capital loss.

### 3. Realized Gains/Losses

As mentioned previously, there will be a gain or loss to calculate upon each Bitcoin disposition. How this gain/loss is calculated once again depends on the jurisdiction of the NPO, so it is best to contact a tax professional for an assessment. Luckily, there are some handy web applications that facilitate this process (currently only for Americans). All an organization needs to do is upload their Bitcoin transaction data and the service will calculate the relevant gains or losses immediately. Two popular ones are:

- LibraTax
- BitcoinTaxes

"there are additional steps to be taken in terms of financial reporting, however once proper procedures are developed and put into practice, the extra steps will be almost unnoticeable."

### CONCLUSION

Clearly, the simplest way to accept Bitcoin donations is to convert them to dollars immediately upon receipt. This involves the lowest amount of risk and additional accounting work, however it essentially excludes the organization from further participating in the Bitcoin economy and from benefitting from its strengths and advantages or form any gains should the value of Bitcoin rise.

Allocating a portion of donations to dollars and keeping the rest in Bitcoin is a strategy that allows NPOs to lock in some of the value and liquidity of dollars immediately, while still maintaining exposure to potential Bitcoin gains. It also allows the organization to spend their Bitcoins, using the Bitcoin network for international transfers or making micro-finance gifts for example, and support the entire ecosystem. Granted, there are additional steps to be taken in terms of financial reporting, however once proper procedures are developed and put into practice, the extra steps will be almost unnoticeable

# THE POTENTIAL

- ► THE POTENTIAL OF CRYPTOCURRENCIES IN AFRICA
- IMPLICATIONS OF BITCOIN FOR THE GLOBAL REMITTANCE MARKET

# THE POTENTIAL OF CRYPTOCURRENCIES IN AFRICA

#### **Meinna Gwet**

Founder & Editor of Bobbyfinance.com

In a three-part series that I wrote on my blog about the future of digital currencies in our financial system, I introduced my readers to the concept of Bitcoin. This crypto-currency has since established itself as a global, fast and cheap means of payment, as well as a store of value.

People often argue that Bitcoin cannot massively spread among African consumers because of the poor technological infrastructure. However, thanks to the mobile telecommunication industry, this hurdle is already being jumped. Plus, the continent has been known for its ability to skip major technological eras, like landlines and computers by going straight to mobile phones and tablets. As a matter of fact, the debit and credit card technologies are presently being skipped, in favor of mobile money systems like M-Pesa, more accessible to the unbanked and rural populations.

The fact is, almost 80% of Africans do not have any account in a formal financial institution. However, despite the hundreds of millions of Africans who lack access to basic banking services, Sub-Saharan Africa is now home to approximately 650 million mobile phone subscribers (40% of the population) and 16% use mobile payment services. These numbers surpass those of the United States and the European Union, and have made the continent particularly attractive for mobile-money platforms.

Of course today, if you promote Bitcoin towards ordinary African citizens as a decentralized currency that you can mint yourself in order to transact online, or to trade fancy derivatives, few people will

follow you. As a matter of fact, this is currently true for most people in the world, too used to the psychological comfort that provide centralized fiat money systems.

However thanks to platforms like M-Pesa, Africans already understand the concept of digital money. Indeed, just like Bitcoins, M-Pesa credits are purchased using 'real' money, and then stored in 'e-wallets' from which payments can be made. So if you promote Bitcoin as an international (mobile) payment system (without getting rid of the idea of local currency), the concept becomes much more accessible to Africans.

## LEVERAGING M-PESA: BITCOIN AS AN INTERNATIONAL MOBILE PAYMENT SYSTEM

The success of M-Pesa is based on its low barrier to entry. Launched in 2007 in Kenya and presently operating in South Africa, Tanzania, DRC, Mozambique, Lesotho, and Egypt; M-Pesa now handles \$18 billion in transactions every year. In Kenya, a country with a mobile penetration of 77% and 18 Million M-Pesa users, about 43% of the country's \$40 billion GDP flows through this system. There are more than 80,000 M-Pesa agents in Kenya and almost 37,000 merchants that receive mobile payment.

To use M-Pesa, all you need is a basic GSM phone. You register at one of the agents and deposit some money in an M-Pesa account. You can then pay for goods and services just by sending a text (SMS) from your mobile to another mobile phone. M-Pesa is thus used to buy food and transportation, to pay and receive salaries, and to send money to relatives in remote and rural areas. Banking, Microcredit and Insurance products have even been developed upon this technology, to cater to the millions of 'unbanked' individuals.

"thanks to platforms like M-Pesa, Africans already understand the concept of digital money" This is where digital currencies like Bitcoin come into play. Because Bitcoin facilitates instant peer-to-peer payment, most transactions can be sent instantly and confirmed in less than 10 minutes, no matter how distant the two parties are. In short, when coupled with local mobile payment platforms like M-pesa, Bitcoin can enable local money transfers to have an international reach. And that drastically reduces transaction fees.

This particularly favors remittances, which are money transfers sent to local Africans by the Diaspora. Indeed, Africa received \$32 billion in remittances in 2013, and this number is expected to grow to more than \$40 billion by 2016. These massive amounts sent from abroad, are subject to fees of up to 12%, charged by wiring services like Western Union and MoneyGram. Therefore, by integrating with M-Pesa, the Bitcoin system can compete with those services, because:

- It is faster and cheaper than traditional international money transfer services
- It easily accommodates micro-transactions

## COMPANIES IMPLEMENTING BITCOIN IN AFRICA

Because Bitcoin users normally require an Internet connection to transact, some companies are presently developing text-based platforms for GSM phones that are more common in Africa than smartphones. Here are some companies that are presently making this happen on the continent:

- BitPesa is a digital currency exchange that accepts Bitcoin in exchange for Kenyan Shillings. By going through BitPesa, individuals who own or buy Bitcoins, can send Kenyan Shillings into a mobile money wallet (M-Pesa, Orange, Airtel, or Yu) at a cost of 3%, which is lower than all other money transfer services to Kenya.
- Kipochi is a Bitcoin wallet service integrated with

M-Pesa. It allows its users to send and receive Bitcoins before converting them to local currency to and from their M-Pesa balance. Users' phone numbers are used as account numbers. Kenyans will thus be able to receive money transfers from the Diaspora in a more efficient way.

- Payfast: Since July 2014, this South-African equivalent of Paypal started offering Bitcoin as a payment option, making it available to the firm's 30,000 merchant customers.
- BitX South Africa is a Bitcoin exchange that offers digital wallet services to buy, sell, store, spend and receive Bitcoin in South Africa
- ZABitcoinATM installed Africa's first Bitcoin ATM machine in August, which allows clients to insert local cash and get Bitcoins in return.
- ICE3X.com is a South-African digital currency exchange that allows you to buy and sell Bitcoins and Litecoins online, and host your online wallet.
- 37coins.com is a U.S.-based Bitcoin wallet that can be used on any mobile phone, by using SMS, which makes it accessible to the 'unbanked'.
- Kitiwa is a tool to help Ghanaians convert Ghana Cedis into Bitcoins, thus enabling Ghanaians to transact online. Ghanaians can then shop or sell items at any of the growing list of companies that accept the digital currency across the world.

It's important to mention however that due to the current hypervolatility of Bitcoin units, international transactions tend to carry a high exchange rate risk. But this is likely to wear out as the currency gains global adoption and becomes more stable.

## GOING FORWARD: UNDERSTANDING AFRICAN ECONOMICS

Before discussing the future of digital currencies in Africa, it's important to understand the current economic state. In fact, underground or shadow transactions represent more than 40% of Africa's GDP. Those transactions are not necessarily illegal, but they are untracked, unregulated, and informal. In an economy where every single commodity is sold by the unit (twenty-cent-cellphone credit, single cigarettes, 100ml packs of powder milk or satchels of cooking oil, 250ml sacks of spring water, etc), transacting in cash is generally the most accessible way to buy micro-portions for one's daily needs. Small businesses, retailers and even multinationals thus have to adapt to this way of doing business, in order to accommodate a customer base that frequently lacks liquidity, and that is constrained by short-term consumption habits. But this overreliance on cash comes with a price.

"underground or shadow transactions represent more than 40% of Africa's GDP. Those transactions are not necessarily illegal, but they are untracked, unregulated, and informal"

Indeed, poor African populations are among the ones in the world that suffer the most from depreciating currencies, when high inflation rates kick in. Whether such inflation is caused by central banks printing too much money to cover expenses, by trade deficits resulting from excess imports of foreign goods and services or by foreign aid programs pumping too much cash into the system, the resulting currency depreciation always ends up striking the poorest

populations first. Indeed low-income citizens are generally the most vulnerable to inflation, because they transact almost exclusively in cash. They do not typically own long-term appreciating assets like real estate, investment funds or gold, so their purchasing power crumbles at the slightest economic downturn. It's in this context that an alternative to fiat money as a currency can seem interesting.

## BITCOIN AS AN ALTERNATIVE STORE OF VALUE IN AFRICA

Crypto-currencies like Bitcoin represent an interesting option for African countries willing to implement a monetary system that is not based on fiat money or on a commodity standard. More specifically:

- Bitcoin was designed to be capped at a maximum production level of 21 million BTC and the increasing complexity of algorithms is making it more difficult to mine Bitcoins. So because of its scarcity, the value of the Bitcoin is expected to increase in the long run, making it a more desirable replacement for traditional fiat currencies which are inherently depreciating assets.
- Bitcoin cannot be controlled by any government or central body. For several countries, this would mean a complete liberation from politically-driven and interventionist monetary policies, and in the case of the CFA Franc zone, the end of the 'Euro standard' and the fall of the not-so-former French colonist's economic hegemony.

Crypto-currencies could solve some challenges caused by the underground economy (the most important one being taxation) by allowing certain transactions to be tracked. Indeed, contrary to popular belief, Bitcoin transactions are very transparent and complete anonymity is hard to achieve. All Bitcoin transactions are public, traceable, and permanently stored in the Bitcoin network. And once addresses are used, they carry the history of all transactions they are involved with. Anyone can thus see the balance and all transactions of any address. Therefore, by associating addresses with individuals' and businesses' information, African governments could dramatically improve their tax collection system, which is a major source of budget deficit in most countries.

## "complete liberation from politically-driven and interventionist monetary policies"

Of course, implementing a digital currency-based monetary system can be very power-intensive (for mining purposes notably), and would require a widespread access to Internet for individuals, in order to replace cash used in daily transactions. But until these challenges are met by most African countries (in addition to the unmentioned macro-economic challenges of transitioning from one system to another) and assuming the currency's value becomes more stable, digital currencies can still serve under the traditional fiat money system, as a cheap and fast means of electronic payment for Africans transacting within and across borders, without the involvement of state agents, companies or banks.

# IMPLICATIONS OF BITCOIN FOR THE GLOBAL REMITTANCE MARKET

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One of the most tangible aspects of our increasingly globalized economy is the international migration of workers. An increasing number of individuals are leaving their home country to find employment abroad. According to the United Nations, the number of international migrants reached 232 million in 2013, up from 175 million in 2000. For many of these expatriate workers, the possibility of earning higher wages and sending money back to relatives in their home countries is the primary motive. This process is commonly referred to as "international remittance transfers". However, the cost of international remittances, although declining over the years, remains considerably high. This makes international remittances a particularly potent usecase for Bitcoin.

## THE IMPORTANCE OF REMITTANCES AND THEIR HIGH COSTS

International remittances can be broadly described as the transfer of wealth from individuals and organizations to recipients in another country. In many cases, individuals are relatives or friends of the recipients. It is not uncommon for remittances to be the primary source of income of the recipients, most notably for recipients in developing countries. According to the migration policy institute, remittances provide the most tangible link between migration and development, for which they are certainly a very powerful tool. Because of higher nominal wages in developed countries, coupled with cost of living discrepancies in developing countries, a migrant's labor can be worth considerably more for recipients than himself.

It is thus no surprise that money sent home by migrants competes with international aid as some of the largest financial inflows to developing countries. More importantly, this is an increasing trend. In 2002, they accounted for about 150 billion USD. Ten years later, according to the World Bank, remittances accounted for \$514 billion, with 401 billion going to developing countries.<sup>1</sup>

These numbers are astonishing when we take into account the high costs, delays and efficiencies associated with remittance payment channels such as international bank wire transfers and other services such as Western Union. These problems can easily be solved by using Bitcoin as a technology that facilitates and accelerates international remittance transfers. In other words, by being a substitute to the existing international transfer infrastructure, Bitcoin can be a powerful tool for international development.

"These problems can easily be solved by using Bitcoin as a technology that facilitates and accelerates international remittance transfers"

<sup>&</sup>lt;sup>1</sup> The World Bank, "Migration and Development Brief 20", Migration and Remittances Unit and Development Prospects Group, April 19 2013

## HOW BITCOIN CAN LOWER THE COST OF REMITTANCES

The major problem associated with remittances is their relatively high cost. According to the World Bank, the average cost of remittance varied in 2013 between 8% and 9% of the amount sent. Unfortunately, the fees are also highest in places in which low-cost alternatives are sorely needed: the costs of remittances for the African diaspora are 12% on average. These fees cost Africans 1.8 billion \$USD each year and consist of a significant barrier in reducing poverty on the continent. These "leaks" can be dramatically reduced using Bitcoin as a method of sending wealth abroad.

Why are remittances so expensive? According to the World Bank, lack of transparency in the remittance market is the leading cause for excess fees - consumers are usually unable to compare prices between different services because of the several variables that make up remittance prices. The cost of remittances can be broadly broken down in three components: the fee charge for sending the amount (using a particular service), the margin taken on the exchange rate when remittances are paid/received in different countries and the fee charged to the recipient of the funds. For instance, in a transfer from the United Kingdom to Gambia with Western Union, the transfer fee counts for 8.3% of the costs with an added 5.9% of conversion fees. The fees to send Bitcoins are extremely low and there are no fees for receiving Bitcoins. For the average transaction, the Bitcoin transaction fee is 0.0001 BTC. As of early September 2014, an international transfer worth 200 USD\$ which is conducted with Bitcoin would cost about 5 cents on average, or 0.025%, compared to about 16\$ using other remittance services. There remain costs associated with converting Bitcoins to national currencies, which may vary from one market to another, but which are directly negotiated between the buyer and the seller, which both have access to global and local exchange rates as a benchmark. These costs are normally incurred by the buyer and not the seller of a currency, meaning that although the sender of Bitcoins will usually have to pay conversion fees to exchange national money for Bitcoin, the receiver of Bitcoins

from overseas can exchange them for national currencies with the possibility to generate extra profits.

More broadly, the existence of Bitcoin as an alternative will create pressure on other traditional remittance payment channels to cut costs and increase their efficiency. According to the World Bank, limited competition is a major cause of the high fees in the international remittance industry. Consumers often shop at traditional money transfer companies because they are not aware of others offering the same service, and/or can't compare the services they typically purchase against other products. It is important to understand that while remittance services certainly do have operational costs, these costs are not the main driver behind the high fees paid by senders and recipients. According to the Overseas Development Institute, the four major causes for fees are:

- Limited competition: Western Union and MoneyGram account for around 2/3 of remittance payout locations in Africa
- Exclusivity agreements between operators, agents and banks
- Financial market regulations, high remediation costs and access to financial institutions
- Financial exclusion and poor regulation (for instance, governments forcing payouts to be handled exclusively through banks

Governments and international development activists should concentrate on removing cost barriers to international remittance transfers as an effective approach to reducing poverty in developing countries. Bitcoin is a powerful tool that they can't afford to dismiss. An increase in the use of Bitcoin as a remittance channel would have snowballing effects in the recipient countries: conversion to national currencies would become easier and cheaper with an increasing adoption of Bitcoin, which would in turn exercise pressure on the traditional banking sector to cut down its cost and increase its accessibility in order to compete with digital currencies.

# OTHER DISRUPTING FACTORS OF BITCOIN FOR THE INTERNATIONAL REMITTANCE MARKET

Another non-negligible advantage of Bitcoin transactions is that they are, of course, extremely fast. It takes about 10 minutes for a recipient to receive a Bitcoin transaction and be able to safely spend the funds elsewhere. This greatly reduces the cash-flow problems and uncertainty created by lengthy delays which, in most remittance corridors, take at least 2 business days, with delays regularly surpassing 5-7 business days. Combined with low costs, this enables the possibility to transfer smaller amounts on a more frequent basis – an added flexibility which can only enhance the financial situation of both senders and recipients.

There is no paperwork, documentation, permits or forms required to send and receive Bitcoins, even internationally. More importantly, you do not need a bank account to receive Bitcoins from abroad. Considering that nearly 2.5 billion people are considered to be "unbanked". To be party to a Bitcoin transaction, all you need is access to a Bitcoin wallet.

One of the main obstacles to using Bitcoin for international remittance is lack of digital currency infrastructure, such as currency exchanges, in the recipient countries. However, the necessity to convert Bitcoin into national currencies is rapidly decreasing as many services are being developed all around the world which allow users to spend their Bitcoins directly for products and services. In the Philippines, for instance, Satoshi Citadel Industries offers a Bitcoin remittance service (Rebit.ph) as well as the ability to pay your bills (such as utilities and telecommunications) directly with Bitcoin.

Moreover, it is now possible (using various services and mechanisms) to receive Bitcoins from overseas without even having access to the internet. Thanks to the integration of Bitcoin with SMS-payment

services, it is no longer a strict necessity to have an internet connection to be able to receive transfers of money using Bitcoin – the sender can simply fund your SMS payment account directly with Bitcoins from overseas. This makes the access to international transfers of money and financial services considerably broader, particularly in sub-Saharan Africa where 16% of adults reported using mobile phones as a means of payment in 2012<sup>2</sup>.

Finally, Bitcoin is censorship-resistant. Indeed, because no middleman is involved in a Bitcoin transaction, it is physically impossible for anyone to stop you from receiving bitcoins. In many countries, governments impose strict restrictions on financial activity or complicated requirements to received international funds that limit the capacity of individuals to receive money for their families working abroad.

"Bitcoin reduces the space, time and institutional barriers between individuals separated by oceans and continents."

In short, Bitcoin reduces the space, time and institutional barriers between individuals separated by oceans and continents. National borders and physical distance are completely irrelevant concepts in the Bitcoin transaction network. There are simply no selection criteria or requirements to use Bitcoin, making it the most open financial system in the world.

<sup>&</sup>lt;sup>2</sup> Asli Demirguc-Kunt and Leora Klapper, "Measuring Financial Inclusion – The Global Findex Database", Policy Research Working Paper 6025, April 2012, p. 26.

# TESTIMONIALS - BITCOIN EMBASSY

- BITCOIN 100
- ► BIG FIVE FOUNDATION
- ► THE WATER PROJECT
- ► FR 33 AID

# BITCOIN EMBASSY

**Guillaume Babin-Tremblay** 

Executive Director

When the Bitcoin Embassy was founded in August 2013, it was the first physical space serving as a resource center dedicated to cryptocurrencies. The Bitcoin Embassy was created to bridge a gap between the crypto world and members of the public. A year later, there are now more than a dozen similar spaces in the world, on every continent and these organizations are always happy to help anyone who is curious about Bitcoin. They are all independent, so the promotion of Bitcoin is getting done in a fully decentralized way. You'll find most of them listed in the resources section of the GiveBtc website. In the last year, we have benefitted from the generosity of the Bitcoin community by receiving their donations and support, but we have also given a lot ourselves and enjoyed seeing dozens of projects get off the ground and other Bitcoin advocate get organized in their cities.

We have been contacted by many non-profit organizations that asked for assistance with Bitcoin and we are happy to act as technical support. Non-profit organizations trying to integrate Bitcoin are a resource for members of the public - you should never be afraid to ask your local Bitcoin association for assistance.

All over the world the Bitcoin community is becoming more diverse and more professional and is working hard at bringing to the public the best information and the most user friendly interfaces with cryptocurrencies. The Bitcoin community is filled with passionate individuals willing to put in many extra hours of work, because they see how the adoption of Bitcoin can truly create a paradigm shift for the better in a variety of domains, and we want to see it used for the greater good.

# BITCOIN 100

Roger Ver Founder

Bitcoin 100's mission is to enlighten all philanthropic organizations to the benefits of accepting Bitcoin as an adjunct (perhaps sole) donation option. We also collect and manage private and voluntary Bitcoin donations from the Bitcoin community and re-distribute this wealth to charitable and non-profit organizations allowing them to establish a lasting endowment and continue to fulfil their missions.

The Bitcoin community has proven to be very generous and, since we started in 2012, we have distributed a total amount of 670.25681 Bitcoins (worth approximately 220K US\$¹) to a wide array of organizations around the world.

Bitcoin is the ideal currency for charitable giving. It allows people from every country in the world to come together to help others in need. For the first time in history, we now have a money that works the same regardless of what political designation the donors or receivers happen to be located in.

There is no excuse for charities across the world not to be accepting Bitcoin. Thanks to our partners at BitPay, non-profits can even have the Bitcoins converted into their local currency free of charge, although I am sure the wiser charities will want to continue to use their funds in Bitcoins. Get started with the currency of the future today!

<sup>&</sup>lt;sup>1</sup> Bitcoin Average Price- November 4th 2014.

# BITGIVE FOUNDATION

Connie M. Gallippi

Founder and Executive Director

The BitGive Foundation is a nonprofit charitable organization representing the Bitcoin community. Our mission is to leverage the power of the Bitcoin community to improve public health and the environment worldwide.

BitGive focuses on charitable giving and demonstrating Bitcoin's social value on a global scale. We celebrated our first anniversary on July 30, 2014, and already have some successful charitable efforts under our belt, including \$4,850 (BTC eq.) raised in one day for Save the Children's Philippines Typhoon Relief Efforts, and 1 BTC donated to Team Rubicon for US tornado relief efforts. Our most recent campaign for The Water Project raised over \$11,000 (BTC eq.) to provide clean, safe water to a community in western Kenya.

Our campaigns and efforts strive to demonstrate the social value of Bitcoin, which is a win-win for both charitable organizations and the Bitcoin community. Not only are our charitable efforts helping those in need, making a donation is something that people can relate to and offers an easy on-ramp to Bitcoin.

The BitGive Foundation serves as a leadership organization for nonprofits in Bitcoin and as a bridge to more traditional nonprofits who are interested in accepting Bitcoin. In this leadership role, BitGive reaches out to charitable organizations to bring them into the Bitcoin community by raising funds for them or developing mutually beneficial partnerships. The Foundation also conducts outreach and education, presents at conferences and events, and shares information on the benefits of Bitcoin for charities, much of which is discussed earlier in this Handbook in the 'Why Accept Bitcoin' section. We are also building partnerships to bring Bitcoin to the developing and third world, striving to open up a global donor market to charitable organizations working in the most remote and impoverished parts of the world.

Currently BitGive is supporting charitable organizations through campaigns and partnerships, and the long term vision is to develop a fund that will function in a similar way to an endowment. Bitcoin holdings that increase over time will provide a sustainable and robust fund from which to give back. BitGive has started this fund and in building it over time aims to move the needle on the important issues facing our world today, leveraging the power of Bitcoin for social good.

# THE WATER PROJECT

### **Peter Chasse**

President & Founder

The Water Project, Inc. is a non-profit organization unlocking human potential by providing sustainable water projects to communities in sub-Saharan Africa who suffer needlessly from a lack of access to clean water and proper sanitation.

For over seven years, we have been helping communities gain access to clean, safe water by providing training, expertise and financial support for water project construction through our staff and implementing partners.

In late 2013, The Water Project began receiving inquiries from the crypto currency community regarding the possibility of accepting various alt-coins and Bitcoin as donations. At the time, like most non-profits we had little knowledge of these new "currencies" or how they could possibly be accepted.

In the U.S., non-profits operate under rather tight regulation and are subject to yearly government reporting and external audits that make careful and consistent book-keeping a must. Understanding how to account for these types of gifts seemed like it would be a real challenge. Still, we set out to learn more.

An initial search led us to Bitcoin100.org, among other sites, and to various online forums and discussions expressing the frustration that more merchants and charities could not or would not accept these kinds of payments. We followed these threads and along the way

discovered a couple of the then emerging Bitcoin payment processors. What became clear, was that when properly implemented, we could accept Bitcoin and not actually hold it (or the risk inherent in doing so). Companies like Coinbase.com, made the process much easier by instantly converting Bitcoin to \$USD in our case. This eliminated one of the most onerous issues...record keeping of gains and losses.

The additional cost-risk of implementing the acceptance of Bitcoin (donation page) on our website, and building a back-end process to manage it, was mitigated by a generous offer from Bitcoin100.org to donate 1BTC to our organization once we launched our Bitcoin donation process. This essentially allowed us to test the waters at no cost. We're glad we did.

The crypto-community's response was immediate. We setup a Bitcoin wallet and offered the altcoin community an opportunity to convert their donations to Bitcoin just prior to giving. They happily embraced this middle ground. Within a few months we had raised over \$30,000 from various cryptocoin communities and direct Bitcoin donations.

Among the MVPs of Bitcoin donor-partners, the BitGive Foundation has helped raise significant awareness and donations for us to date. The flexibility of Bitcoin wallets allowed us to quickly roll out individual fundraising campaigns, much like crowdfunding, that allow folks like BitGive to raise Bitcoin among their peer groups and to track progress along the way. Bitgive was one of the first to embrace the idea and has met their \$10,000 fundraising goal.

Overall, we've seen an encouraging thread of philanthropy among the cryptocurrency community and are looking forward to seeing its continued development. While the real promise of Bitcoin goes far, far beyond simply accepting donations, we're glad we've taken this first step. You can read more about what might be next at: https://thewaterproject.org/welcome-cryptos

# FR33 AID

#### Teresa Warmke

Fr33 Aid Co-Founder and Treasurer

Fr33 Aid is an international, decentralized organization that supports people who promote the value of mutual aid.

### HELPING PEOPLE HELP EACH OTHER

Our primary activity involves supporting volunteers who provide first aid and educational services at conferences and other events. Some of our team members provide CPR and first-aid training in order to help people help each other and increase the chance of survival from serious medical events like cardiac arrest.

Other team members provide yoga classes and wellness checks to help people improve their health and well-being. Another provides e-cigarette workshops to help people quit smoking. We believe the more we help people help each other, the less dependent we all can be on services provided by government organizations.

We also support disaster relief projects. In fall of 2013, we raised nearly 20 Bitcoins to help victims of Typhoon Haiyan. The funds went directly to friends of our team who were living in the Philippines and found themselves in a position to help their neighbors recover from the disaster. They targeted areas that weren't being served by large aid organizations and distributed food, water, medical supplies, sleeping mats and mosquito nets to people who had lost nearly everything. Fr33 Aid applauds the can-do spirit of our friends in the Philippines who stepped up to help in that disaster. We were very moved by the generosity of the Bitcoin community and their willingness to step up and help this type of grass-roots effort.

### **FUELED BY BITCOIN**

Fr33 Aid began accepting Bitcoin in January 2012. Many of our supporters were early adopters, and they showed us how easy it is to post a Bitcoin address and enable more and larger donations. Bitcoin is much easier to work with than the legacy banking system. For example, it is very helpful to accept Bitcoin straight into our account and not have to worry about the safety concerns that come with transporting cash back to a brick-and-mortar bank.

More importantly, we believe that using decentralized, peer-to-peer systems like Bitcoin are the most peaceful, sustainable way of doing business. Bitcoin allows us to withdraw our support from the organizations that control national currencies. These organizations fund projects like war, which could not be funded any other way than through coercion and central control. In keeping with our principles, in April 2013, we began operating exclusively in Bitcoin.

Fr33 Aid team members do not charge for their services. We are a charity organization that's funded entirely by the generosity of our donors and not affiliated with any government.

