



28th May 2015

Meet-up Theme: The Basics



Meet-up Theme: The Basics

- **Introduction**
- **What is Bitcoin?**
- **What is the Blockchain?**
- **Bitcoin Wallets**
- **Demonstration of Bitcoin Transactions**
- **Coffee Break**
- **Q&A**
- **BANI Moving Forward**
- **Membership & Networking**

What is Bitcoin?

What is Bitcoin?

Many Things to Many People

- **A Currency:** Send Units of Value, Fungible, Divisible.
- **Commodity:** Scarcity Stores Wealth, Market Fluctuates with Speculation.
- **Protocol:** Decentralised Trust on the Blockchain.
- **Technology:** Services & Solutions Implemented & Integrated.

What is Bitcoin?

MANY THINGS TO MANY PEOPLE

- Bitcoin is technology - the start of decentralized ideas
- It uses a public ledger to enforce transparency
- It uses peer-to-peer networks to transfer value from one person to the other in seconds – anywhere on the planet
- Every transaction is recorded by every user in network
- Not only is it the first time we have had open-source money, but it's also the 1st programmable money *

What is Bitcoin?

Comparisons with Money



What Is Money?

What is Bitcoin?

Comparisons with Money

Money Is: A Medium of Exchange

- Stands in for an arbitrarily long chain of barter.
- Widely accepted.



What is Bitcoin?

Comparisons with Money

Money Is: A Unit of Account

- Recognizable
- Fungible
- Divisible
- Transportable
- Transferable
- Hard to counterfeit



What is Bitcoin?

Comparisons to Money

Money Is: A Store of Value

- Stable supply
- Durable
- Securable
- Stable value



What is Bitcoin?



What Is Cryptocurrency?

What is Bitcoin?

Cryptocurrency Is: A Bearer Instrument

- Holder has ownership
- No other records kept as to identity of owner
- Easy to keep anonymous
- Hard or impossible to replace if lost or stolen



What is Bitcoin?

Difference to Tradition Currencies



What Makes Bitcoin Different?

What is Bitcoin?

Difference to Tradition Currencies

Bitcoin Is: Decentralized, Distributed, Voluntary

- No central issuing or verification authority, no “Bitcoin Corp.”
 - Bitcoin Foundation (bitcoinfoundation.org)
 - Growing numbers of entrepreneurs accepting or basing new business concepts on Bitcoin
- Relative to other bearer instruments
 - Easier to transport anywhere in the world
 - Easier to secure
- Relative to other electronic currencies
 - Immune to sovereign censorship, shutdown, or confiscation
 - Immune to inflation and bank defaults

What is Bitcoin?

Under the Hood



How Does Bitcoin Work?

What is Bitcoin?

Under the Hood

- Bitcoin is a protocol. The unit of account is in “bitcoins”.
- Based on the **blockchain**: A growing general public ledger of cryptographically-signed transactions.
- ALL transactions are public BUT are not by default tied to anyone's real identity.
- Anonymity and traceability are “**user defined**” i.e. counter parties can be as anonymous as they take steps to be – even to each other.
- Bitcoin transfers are not physically moving an object from A to B, but simply adding a new, publicly accepted transaction to the blockchain.
- Secured by collective compute power of miners. It is very easy for every client, miner or not, to check the validity of a new block, however, deems very difficult to CREATE a new valid block.
- Miners are awarded newly-minted bitcoins or transaction fees for successfully finding blocks. The distribution algorithm ensures that bounty of new bitcoins will approach an asymptote of **21M** and subsequently only transaction fees will be rewards for mining.

What is Bitcoin?



What Do Bitcoins “Look” Like?

What is Bitcoin?

What Do Bitcoins “Look” Like?

1454A2geTxaJwF8eqry7oLEcdomgDSj6Zx



Public Key (“Address”)

34 characters starting with **1** or **3**
Represents a possible destination for payment

5JHkYd4mYkTsCsF5axnFj573PG6tqpeJ39Rz2M33vwBka4S1hu6



Private Key

51 characters starting with **5**
Required to transfer value from the address

What is the Blockchain?

- A decentralised public ledger.
- A currency, finance, economic, smart property system.
- A registry, listing, and management system for all the worlds assets and smart property.
- A society's public records repository, representative and participatory legal and governance system.
- A tool for science, health, literacy and art applications.
- A new form of information technology, a decentralised system of checks and balances that is universal.

What is the Blockchain?

Financial and Public Records Applications

- Financial instruments

1. Currency
2. Private equities
3. Public equities
4. Bonds
5. Derivatives commodities
6. Spending records
7. Trading records
8. Mortgage/loan records
9. Servicing records
10. Crowdfunding
11. Microfinance
12. Proxy fights

- Public Records

1. Land titles
2. Vehicle registries
3. Business incorporations
4. Criminal records
5. Passports
6. Birth certificates
7. Death certificates
8. Voter Registration
9. Voting Records
10. Health/safety inspections
11. Building permits
12. Court records

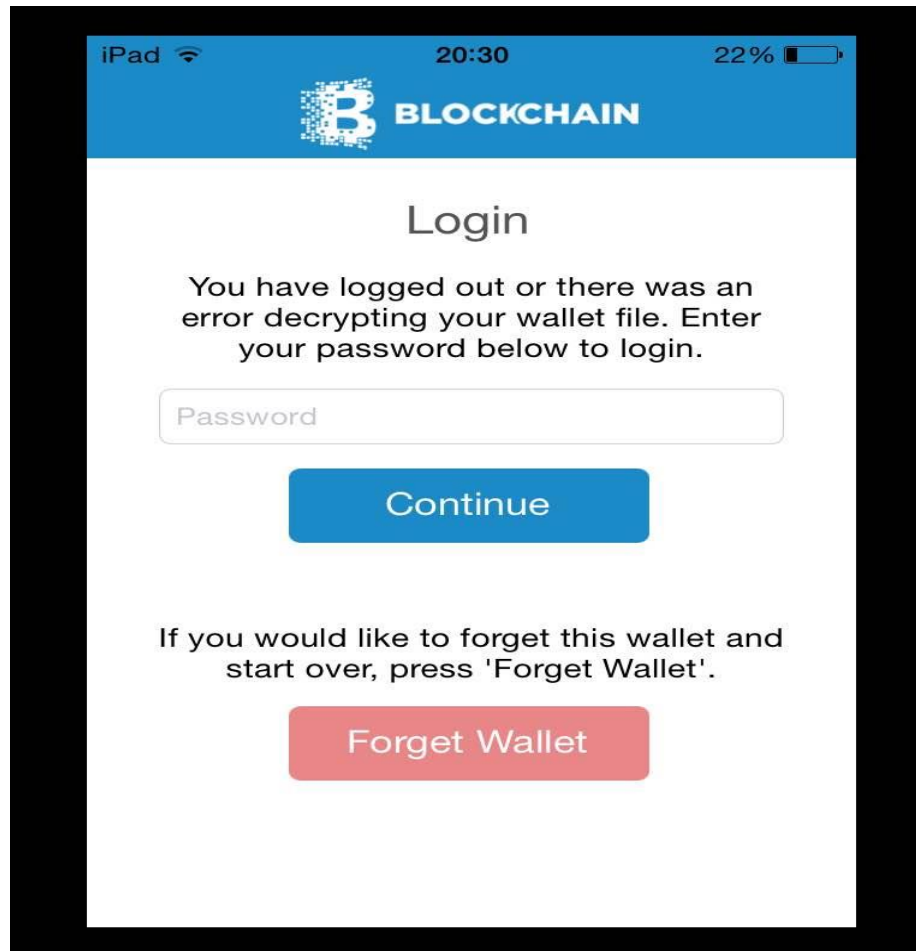
Bitcoin Wallets

Different Types

- **Mobile:** Blockchain, Mycelium, Airbitz, Bitcoin Wallet, Hive, Pheeva, Breadwallet, Green Address.
- **Desktop:** Armory, Electrum, BitGo, MultiBit, Bitcoin Core.
- **Hardware:** Trezor, Ledger Nano, Case.
- **Web:** Coinkite, Coinbase, Circle, Xapo, Coinapult, Netki.


Bitcoin Wallets

Login



The image shows a screenshot of a Bitcoin wallet login interface on an iPad. The status bar at the top indicates 'iPad', signal strength, time '20:30', and battery level '22%'. The app header is blue with a Bitcoin logo and the word 'BLOCKCHAIN'. The main content area is white and titled 'Login'. It contains a message: 'You have logged out or there was an error decrypting your wallet file. Enter your password below to login.' Below this is a password input field with the placeholder text 'Password'. A blue 'Continue' button is positioned below the input field. At the bottom, there is a link that says 'If you would like to forget this wallet and start over, press \'Forget Wallet\'.' followed by a red 'Forget Wallet' button.

iPad 20:30 22%

 BLOCKCHAIN

Login

You have logged out or there was an error decrypting your wallet file. Enter your password below to login.

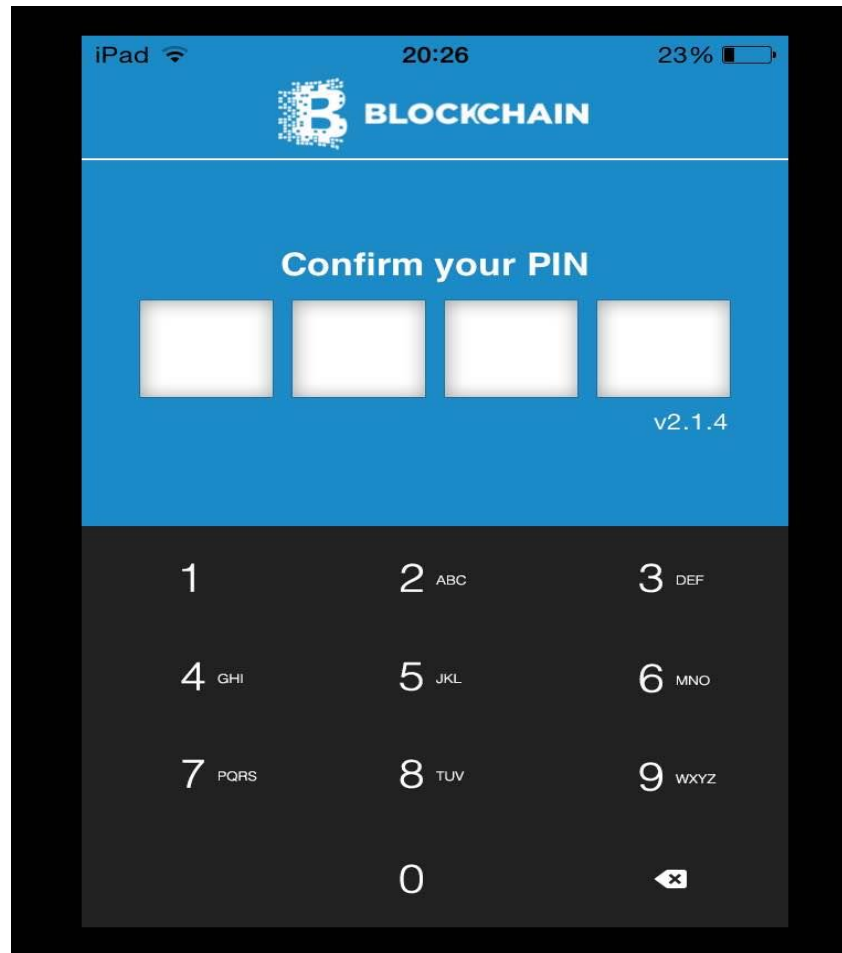
Continue

If you would like to forget this wallet and start over, press 'Forget Wallet'.

Forget Wallet

Bitcoin Wallets

Enter Security Pin



The image shows a screenshot of a Bitcoin wallet application on an iPad. The status bar at the top indicates 'iPad', signal strength, time '20:26', and battery level '23%'. The app's header is blue with a Bitcoin logo and the word 'BLOCKCHAIN'. The main screen is blue and displays the text 'Confirm your PIN' above four empty white boxes for PIN entry. The version number 'v2.1.4' is visible in the bottom right of the blue area. Below this is a dark grey numeric keypad with digits 1-9, 0, and a backspace icon.

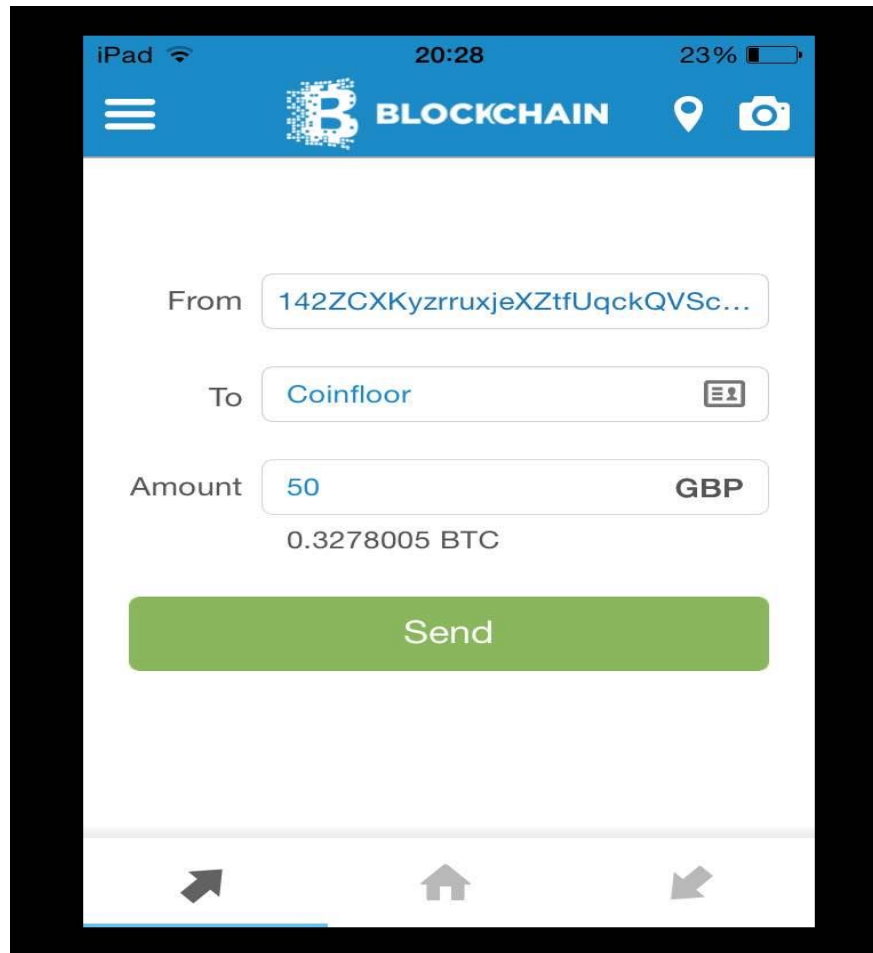
Confirm your PIN			
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

v2.1.4

1	2 ABC	3 DEF
4 GHI	5 JKL	6 MNO
7 PQRS	8 TUV	9 WXYZ
0	⌫	

Bitcoin Wallets

Send Bitcoin



The screenshot shows a Bitcoin wallet application on an iPad. The status bar at the top indicates 'iPad', signal strength, time '20:28', and battery level '23%'. The app's header is blue with a hamburger menu icon, a Bitcoin logo, the text 'BLOCKCHAIN', a location pin icon, and a camera icon. The main form has three input fields: 'From' with the address '142ZC XKyzrruxjeXZtfUqckQVSc...', 'To' with the label 'Coinfloor' and a contact icon, and 'Amount' with the value '50' and the currency 'GBP'. Below the amount field, the equivalent value '0.3278005 BTC' is displayed. A large green 'Send' button is positioned below the form. At the bottom of the screen is a standard iOS navigation bar with back, home, and forward arrows.

From 142ZC XKyzrruxjeXZtfUqckQVSc...

To Coinfloor

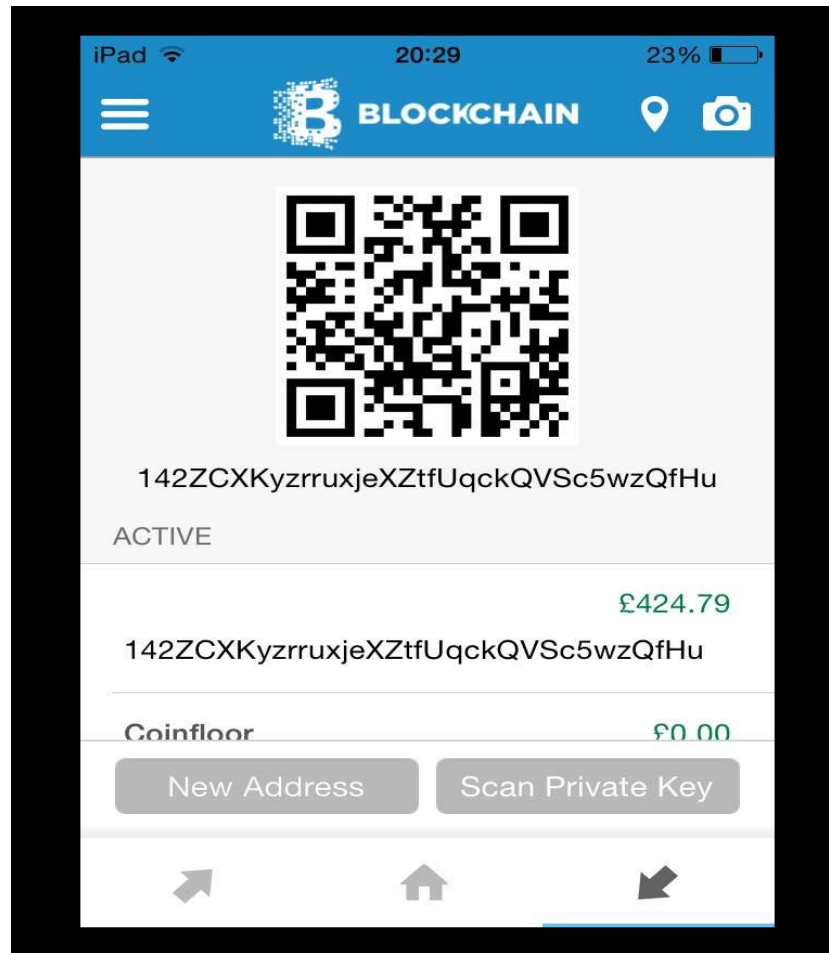
Amount 50 GBP

0.3278005 BTC

Send

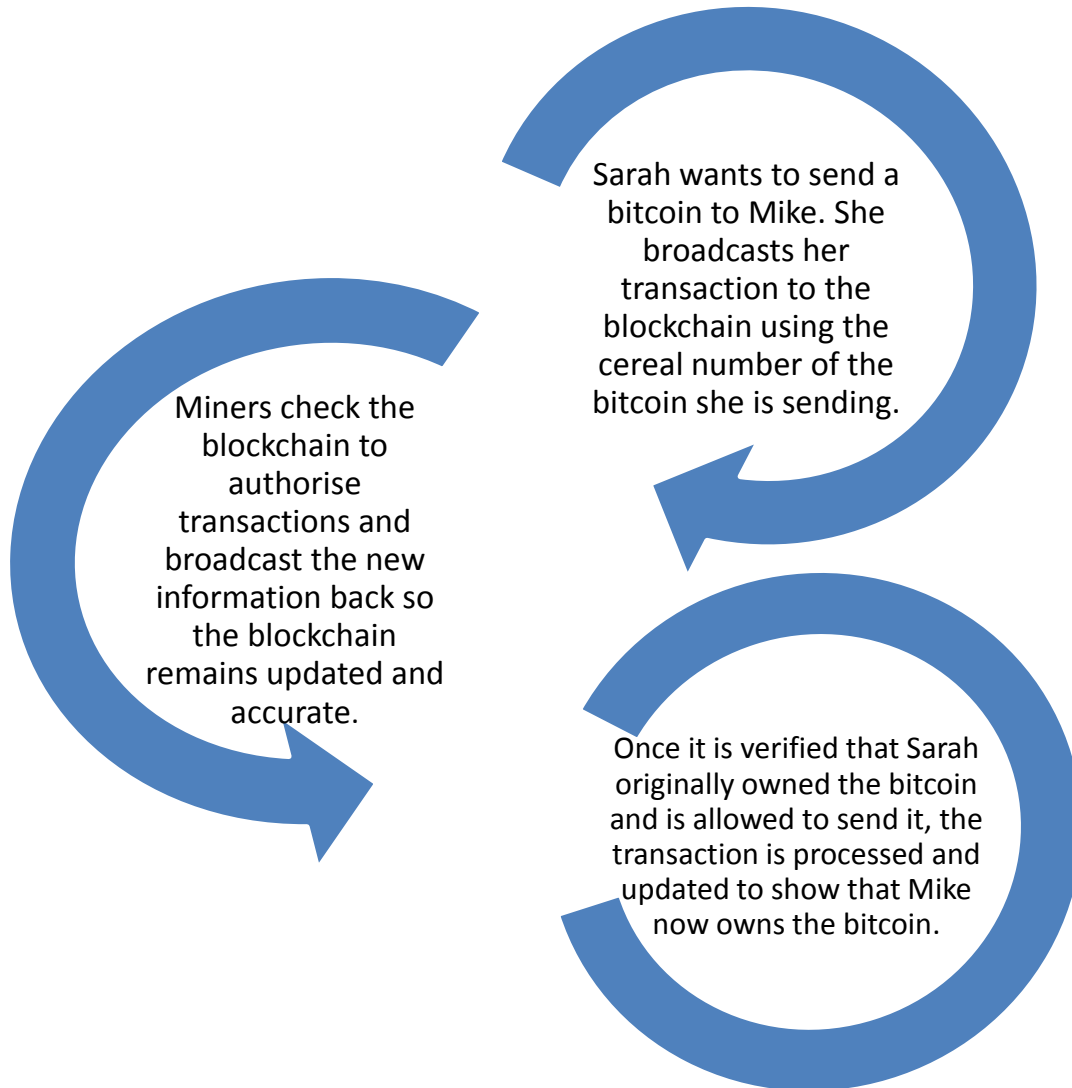
Bitcoin Wallets

Receive Bitcoin



Bitcoin Transactions

Completing a Bitcoin Transaction on the Blockchain



BANI Objectives

- **Protect**
- By monitoring regulatory and legislative developments regarding Bitcoin, Cryptocurrencies, and Blockchain applications in N.Ireland and providing expertise and advice to policy-makers, we are confident in our ability to shape their outcome in accordance to the shared interests of the Bitcoin community.

BANI Objectives

- **Educate**
- Our educational campaigns will ensure that citizens of N.Ireland have access to easily understandable, accurate and updated knowledge and information relating to Bitcoin, Cryptocurrencies and Blockchain applications. We seek to foster fair reporting and a positive public opinion of Bitcoin across N.Ireland by actively engaging with the media, colleges, businesses and the general public.

BANI Objectives

- **Promote**
- As an open-source project, Bitcoin, Cryptocurrencies and the Blockchain relies on a number of volunteers dedicated to constantly updating, maintaining, and improving the Bitcoin protocol. We will encourage core development and protect the integrity of Bitcoin's technological infrastructure. We will also be actively engaging with the members of the grassroots Bitcoin community here in their developing a Bitcoin related ecosystem with support and promotion.

Our First Project

- Our first project in N.Ireland is to build up our community. Bitcoin Association Northern Ireland is a non-profit organisation and it is only through the support, participation and donations from the general public, businesses and the Bitcoin/Crypto community here that we will be able to collectively protect, educate and promote Bitcoin, Cryptocurrencies and Blockchain applications to the mainstream public.

Thank you

BITCOIN ASSOCIATION



NORTHERN IRELAND