

**TECH TALK**  
**March 21, 2024**

# **A Great Big Thank You to Cece!**

Who suggested these two topics

**OPEN SOURCE  
TECHNOLOGY AND  
CRYPTOCURRENCY**

# OPEN SOURCE TECHNOLOGY

- What is it and its history?
- What are the different products available?
- How do I get it?

# Open Source

- Open source refers to any program whose “source code” is made available for use or modification as users or other developers see fit.
  - Source code is a group of instructions a programmer writes using computer programming languages. Once a programmer writes a line or set of source code, they can later use it in a website, application or another type of computer program to give it instructions.
- Unlike proprietary software, open source software is computer software that is developed as a public, open collaboration and made freely available to the public.

# Open Source History

- During the early years of software development, programmers would often share software in order to learn from one another and grow the field of computer programming. This spurred the creation of the Free Software Foundation (FSF) in 1985 although free software has been around since 1979.
- The FSF later was replaced by the Open Source Initiative (OSI) -- a group of software developers that creates software intended to be freely shared, improved and redistributed by others.

- The open source movement has not been without its detractors like Microsoft's Jim Allchin. In 2001, he stated that the OSI was an "intellectual property destroyer."
- Today, however, Microsoft and many others have joined the free and open source software movement in one way or another. This has created a major shift in how open source software is viewed.

# Some video explanations...

- What is open source software:
- <https://www.youtube.com/watch?v=1ehpgbb3XD0>
- What is Open Source explained in LEGO:  
<https://www.youtube.com/watch?v=a8fHgX9mE5U>



# Five different products available from open source technology

- Mozilla Firefox – customizable internet browser and free OSS
- VLC Media Player – free software to play audio and video computer files.
- Linux – free operating system just like Windows, iOS, and Mac OS. Used in a lot of Android touch screen devices like smartphones.
- PHP – software development language used for creating websites and other digital platforms.

- LibreOffice – complete office suite that offers:
  - Impress = PowerPoint (what I use for all my presentations)
  - Writer = Word (for word processing)
  - Calc = Excel (for spreadsheets)
  - Draw = Paint (for vector graphics and flowcharts)
  - Base = Access (for databases)
  - Math – (mathematical and scientific formula editing)

# Free OSS – How do I get it?

- For this introductory presentation, I will only cover how to get LibreOffice
- First off, is LibreOffice safe?
  - Yes, it is safe to download. In fact, it's a recognized and trusted open-source software.
  - However, to ensure the safety of your download, you should get the software directly from the official LibreOffice website, which is the most reliable and secure source since other sources may not be as secure.

- So, how do I get it? <https://www.youtube.com/watch?v=qjOzQ5qaR5Y>
- Here are written instructions in case you need them:
  - Go to libreoffice.org.
  - At the top of the website, look for the word “Download” and click on the little down arrow to bring up the menu
  - The first choice is “Download LibreOffice”
  - Click on it and let it run until the Wizard appears to walk you through (in some instances you might have to go to the downloaded file and click on it to start the download)

- So how much does LibreOffice really cost?
  - Hey, don't they always say that there's no such thing as a free lunch or free software. If you don't believe me, ask Microsoft and/or Apple.
  - So what is the real cost for the download and for using LibreOffice?
  - Nothing. It's free.
- But there can be a downside...

- Since there isn't any company behind or selling the software, there isn't any Help Line or Customer service number to call. LibreOffice does have a Help feature that you can access online. It's set up as a sort of 'owner's manual,' and you can search it or view the different contents by subject.
- You can also search the Internet for "LibreOffice bulletin boards" and that can take you to places where others ask questions that might fit into what you want to know or you can post your own question to see if others have the same situation and can offer advice.

- LibreOffice does regular updates and you get a little pop-up notice when there's another update that you need to download.
- One time I had a problem because I downloaded an update for the business version instead of the regular version. That time I took my laptop into the Geek Squad and they cleaned it up for me in no time.
- I use the Geek Squad at the Best Buy across from Southpoint Mall. I keep a year's service agreement as insurance should anything go wrong on my laptop, smart TV, or smartphone.

- There are other office suite free software you can download and use. Simply search online to find them.
- If you have a gmail account, you already have free office suite software. Google offers the following free items:
  - Doc – word processing
  - Sheets – spreadsheet
  - Slides – presentation slides



# CRYPTOCURRENCY

- What is it and its history?
- What are the different products?
- What are the pros and cons?
- What are the legalities?

# What is cryptocurrency?

- Cryptocurrency or crypto is a digital currency designed to work as a medium of exchange through a computer network that is not reliant on any central authority, such as a government or a bank, to uphold or maintain it.
- Individual coin ownership records are stored in a digital ledger, which is a computerized database using strong cryptography to secure transaction records, control the creation of additional coins, and verify the transfer of coin ownership.

- Cryptocurrencies are not considered to be currencies in the traditional sense, and varying legal treatments have been applied to them in various jurisdictions, including classification as commodities, securities, and currencies. Cryptocurrencies are generally viewed as a distinct asset class in practice.
- To use cryptocurrencies, you need a cryptocurrency wallet. These wallets can be software that is a cloud-based service or is stored on your computer or on your mobile device. The wallets are the tool through which you store your encryption keys that confirm your identity and link to your cryptocurrency.

# Crypto – brief history

- The first cryptocurrency, an open source software, was created by Satoshi Nakamoto, the pseudonym for an anonymous computer programmer or group of programmers, on January 3, 2009, when Bitcoin software was made available to the public. The software, over time, would issue some 21 million Bitcoins to the public.
- There are more than 400 million cryptocurrency users across the globe, and approximately 18,000 businesses now accept a form of crypto as payment.
- The average cryptocurrency owner is a white 38-year-old male with a \$111,000 annual salary. [Who probably lives in the basement of his parent's home.]

# Continents by Cryptocurrency Usage

1. Asia - Approximately 263 million crypto users
2. North America - Approximately 57 million
3. Africa - Approximately 38 million
4. South America - Approximately 33 million
5. Europe - Approximately 31 million
6. Oceania - Approximately 1 million

- Blockchain and cryptocurrency explained in ten minutes:
  - <https://www.youtube.com/watch?v=MFw8Ax0p7dA>

# Top Five Cryptocurrencies as of March 2024

1. Bitcoin (BTC) - Market cap: \$1.4 trillion - In May 2016, you could buy one Bitcoin for about \$500. As of Mar. 12, 2024, a single Bitcoin's price was around \$72,295. That's a growth of 14,359%.
2. Ethereum (ETH) - Market cap: \$484.4 billion - From April 2016 to the end of March 2024, its price went from about \$11 to around \$4,033, increasing 36,565%.
3. Tether (USDT) - Market cap: \$102.4 billion - a stablecoin, meaning it's backed by fiat currencies like U.S. dollars and the Euro and hypothetically keeps a value equal to one of those denominations. It's favored by investors who are wary of the extreme volatility of other coins.

4. Binance Coin (BNB) - Market cap: \$79.2 billion - BNB's price in 2017 was just \$0.10. By late March 2024, its price had risen to around \$530, a gain of 529,400% - it can be used for trading, payment processing or even booking travel arrangements. It can also be traded or exchanged for other forms of cryptocurrency, such as Ethereum or Bitcoin.

5. Solana (SOL) - Market cap: \$67.0 billion - Developed to help power decentralized finance (DeFi) uses, decentralized apps (DApps) and smart contracts - launched in 2020, SOL's price started at \$0.77. By late March 2024, its price was around \$151.15, a gain of 19,530%.



# Pros and Cons

## Cryptocurrency pros

- Some supporters like the fact that cryptocurrency removes central banks from managing the money supply since over time these banks tend to reduce the value of money via inflation.
- In communities that have been underserved by the traditional financial system, some people see cryptocurrencies as a promising foothold. Pew Research Center data from 2021 found that Asian, Black and Hispanic people "are more likely than White adults to say they have ever invested in, traded or used a cryptocurrency."
- Others advocate for cryptocurrencies because it's a decentralized processing and recording system and can be more secure than traditional payment systems due to the blockchain technology behind it.

## Cryptocurrency cons

- Many cryptocurrency projects are untested and blockchain technology in general has yet to gain wide adoption. If the underlying idea behind cryptocurrency does not reach its potential, long-term investors may never see the returns they hoped for.
- For shorter-term crypto investors, there are other risks. Crypto prices tend to change rapidly, and while that means that many people have made money quickly by buying in at the right time, many others have lost money by doing so just before a crypto crash. These wild shifts in value may make people less likely to use Bitcoin as a payment system if they are not sure what it will be worth the next day.

## **Cons, cont.**

- The environmental impact of Bitcoin and other projects using certain mining protocols is significant. The University of Cambridge said that worldwide Bitcoin mining consumes more than twice as much power as all U.S. residential lighting.
- There is also a noise pollution problem for neighbors near a crypto mine that's operating. The noise comes from the massive cooling fans that the facility runs to keep their computers from overheating. Data centers, like bitcoin mines, also run massive cooling fans that have angered nearby residents.

# The Legalities of Crypto

- Cryptocurrency networks lack regulation. This enables criminals to evade taxes and financial sanctions as well as launder money. It also provides a platform for other corruption related crimes such as bribery and embezzlement.
  - Rather than laundering money through an intricate net of financial actors and offshore bank accounts, laundering money through altcoins can be achieved through anonymous transactions.
  - Crypto makes tax evasion simpler for some individuals. Since taxable income is based upon what a recipient reports to the revenue service, it becomes extremely difficult to account for transactions made using existing cryptocurrencies since this is a mode of exchange that is complex and difficult to track.

- Ransomware and darknet markets are two of the most prominent forms of crypto crime that saw revenues rise in 2023. The growth of ransomware revenue suggests that perhaps ransomware attackers have adjusted to organizations' cybersecurity improvements.
- Growth in darknet market revenue comes after a 2022 decline in revenue largely driven by the shutdown of Hydra, which captured over 90% of all darknet market revenue at its peak. While no single market has yet emerged to take its place, the sector as a whole is rebounding.

- What can you buy on the darknet?
- In addition to drugs, which include prescription pharmaceuticals as well as illegal drugs, darknet markets offer a wide range of products and services. Some markets refuse to sell weapons or poisons, but many list stolen information, illegal services like hacking for hire, illegal pornographic content, and more.
- Transactions are somewhat anonymous, making detection by law enforcement more difficult. However, all transactions on a public blockchain (the technology used by some virtual currencies) can be tracked to some extent.

- So that's the very basics on cryptocurrency
  - If you are really interested in investing in crypto, there are a whole lot of videos on YouTube, ranging from ten minutes to three hours, that will teach you how to invest and how to use it.
  - If you're not interested in investing, at least now if you have a white 38-year-old male making \$111,000 a year in your family or living in your basement, you can impress him by how much you know about cryptocurrency.

# NEXT MEETING: April 18, 2024

- Subject to be determined, but thanks to Cece, it might be something like Data Mining, 3D Printing or what the heck is 5G.
- If you read about or see something on TV about new technology and want to know more, please send the suggestion to me. I can then research and put together a presentation so we can all learn about it.



**THANKS FOR COMING!**