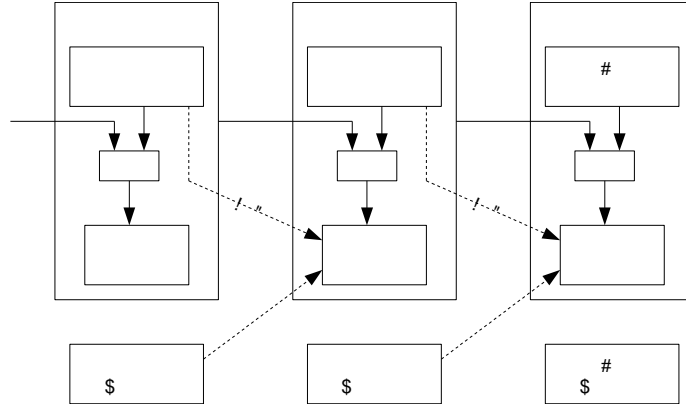


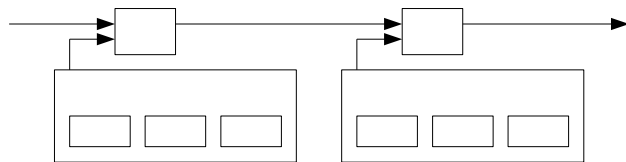
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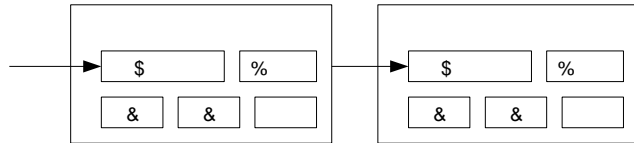
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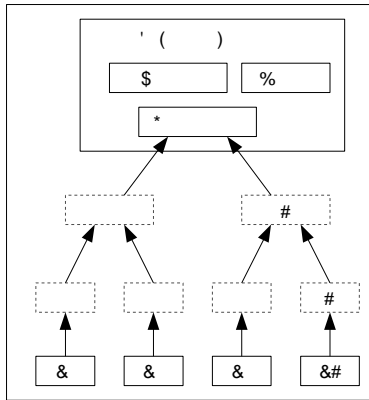
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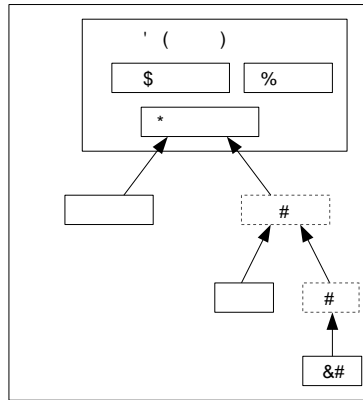
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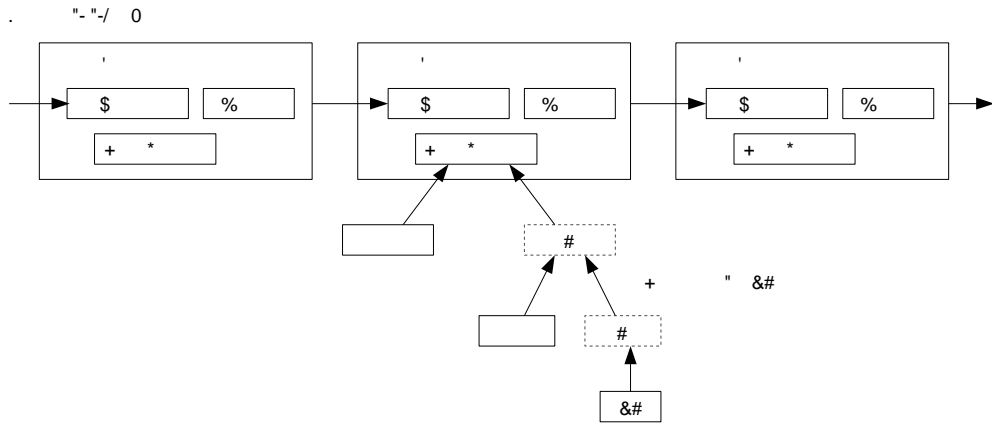
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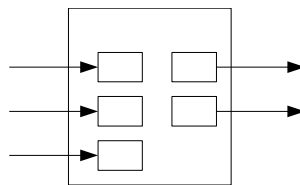
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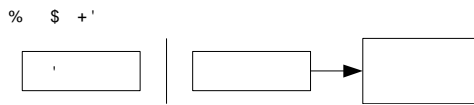
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Bitcoin Glossary:

2018 Annual National Seminar

2018
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Genesis Block - The very first block in the block chain of any digital currency.

Hash - A cryptographic hash is a mathematical function that takes a file and produces a relatively short code that can be used to identify that file. A hash has a couple of key properties: It is unique. Only a particular file can produce a particular hash, and two different files will never produce the same hash. It cannot be reversed. You can't work out what a file was by looking at its hash. Hashing is used to prove that a set of data has not been tampered with. It is what makes bitcoin mining possible.

Hash Rate - The hash rate is the measuring unit of the processing power of the Bitcoin network. The Bitcoin network must make intensive mathematical operations for security purposes. When the network reached a hash rate of 10 Th/s, it meant it could make 10 trillion calculations per second.

Microtransaction – The ability to pay for things in very small sums thanks to the fact that Bitcoin may be extended to 8 decimal places. Microtransactions are especially important to Bitcoin casinos by providing players the ability to deposit and gamble fractions of Bitcoins.

Mining - The act of producing units of a cryptocurrency (such as bitcoins) through some kind of effort. The effort is required so that people can't just create infinite amounts of the digital currency, which would devalue it. In bitcoin, mining requires computing power. Here is a detailed description of how mining works. Bitcoin mining is the process of making computer hardware do mathematical calculations for the Bitcoin network to confirm transactions and increase security. As a reward for their services, Bitcoin miners can collect transaction fees for the transactions they confirm, along with newly created bitcoins. Mining is a specialized and competitive market where the rewards are divided up according to how much calculation is done. Not all Bitcoin users do Bitcoin mining, and it is not an easy way to make money.

Mt. Gox – one of the first Bitcoin exchanges that began liquidating after more than 850,000 of its users' Bitcoins were lost or stolen – an amount equal to more than \$450,000,000 at the time.

Output - When a bitcoin transaction takes place, the output refers to the destination address used in the transaction.

Paper Wallet - Some people prefer to store their bitcoin in the paper wallet – a form of cold storage – in order to improve security. The term simply refers to a printed sheet of paper that holds a number of public bitcoin addresses and corresponding private keys.

P2P - Peer-to-peer refers to systems that work like an organized collective by allowing each individual to interact directly with the others. In the case of Bitcoin, the network is built in such a way that each user is broadcasting the transactions of other users. And, crucially, no bank is required as a third party.

Private Key - A private key is a secret piece of data that proves your right to spend bitcoins from a specific wallet through a cryptographic signature. Your private key(s) are stored in your computer if you use a software wallet; they are stored on some remote servers if you use a web wallet. Private keys must never be revealed as they allow you to spend bitcoins for their respective Bitcoin wallet.

Proof of Work [PoW] - Proof of work simply refers to the output of any efforts to mine bitcoin. In the bitcoin block chain, the hashing of a block takes time and effort, meaning the hash block can be considered proof of work.

Public key - The public key is a string of digits and letters (your bitcoin address). When hashed with a corresponding string known as a private key it digitally signs and online communication.

Satoshi – A Bitcoin “cent”, the smallest form of Bitcoins. One Bitcoin is equal to 1 million Satoshis.

Satoshi Nakamoto – the creator of Bitcoin and the author of the original Bitcoin whitepaper and code. His real identity is unknown to the world.

Silk Road – An underground website, as part of the “dark web”, that was essentially a black market online. One could purchase illegal drugs, organs or hire assassins online. The site used cryptocurrencies such as Bitcoin and was shut down in 2013 by the FBI.

SHA-256 - Every digital currency must have a cryptographic function that dictates how the hash is constructed. In bitcoin, SHA-256 is this function, and is used as the basis for hash creation (bitcoin's proof of work).

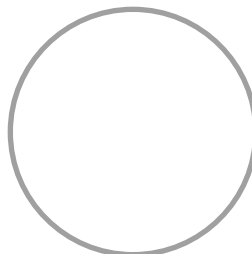
Signature - A cryptographic signature is a mathematical mechanism that allows someone to prove ownership. In the case of Bitcoin, a Bitcoin wallet and its private key(s) are linked by some mathematical magic. When your Bitcoin software signs a transaction with the appropriate private key, the whole network can see that the signature matches the bitcoins being spent. However, there is no way for the world to guess your private key to steal your hard-earned bitcoins.

Transaction Fee - Some transactions that occur in the bitcoin block chain contain transaction fees. These transaction fees are paid to the miner that hashes the block in question.

Wallet - A Bitcoin wallet is loosely the equivalent of a physical wallet on the Bitcoin network. The wallet actually contains your private key(s) which allow you to spend the bitcoins allocated to it in the block chain. Each Bitcoin wallet can show you the total balance of all bitcoins it controls and lets you pay a specific amount to a specific person, just like a real wallet. This is different from credit cards where you are charged by the merchant.

*This glossary contains terminology and explanations of concepts relevant to various emerging technologies. The purpose of the glossary is to inform the reader of the most commonly used vocabulary terms in the cyber world. This glossary was compiled from various sources readily available on the

To receive updates on future events and other Commission activities, visit us on Twitter @TheUSSCgov, or subscribe to e-mail updates through our website at www.uscc.gov. For guidelines questions, call our Helpline at 202.502.4545, and to request training, email us at training@uscc.gov.



The United States Sentencing Commission, an independent agency in the judicial branch of the federal government, was organized in 1985 to develop a national sentencing policy for the federal courts. The resulting sentencing guidelines provide structure for the courts' sentencing discretion to help ensure that similar offenders who commit similar offenses receive similar sentences.