

# The Ethereum Blockchain

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# Distributed Ledger Technologies

- Popular DLTs: Bitcoin, Ethereum, Zerocash, Monero, Ethereum Classic
- DLTs offer:
  - Security
  - Decentralized, Distributed, and Trustless Network
  - Stateful Code/Data
  - Privacy
- General Uses:
  - Identity
  - Value and Token transfer (financial applications)
  - Governance

# Consensus Systems

- Venture production studio
- Spokes:
  - Crowdfunding
  - Governance
  - Social/Media/Entertainment
  - Enterprise clients
- Highly distributed across world
  - Main office in Brooklyn, NYC
  - Office in Toronto

# Popular Blockchains

Market Cap ▾

Trade Volume ▾

Trending ▾






Tools ▾

All ▾

Currencies ▾

Assets ▾

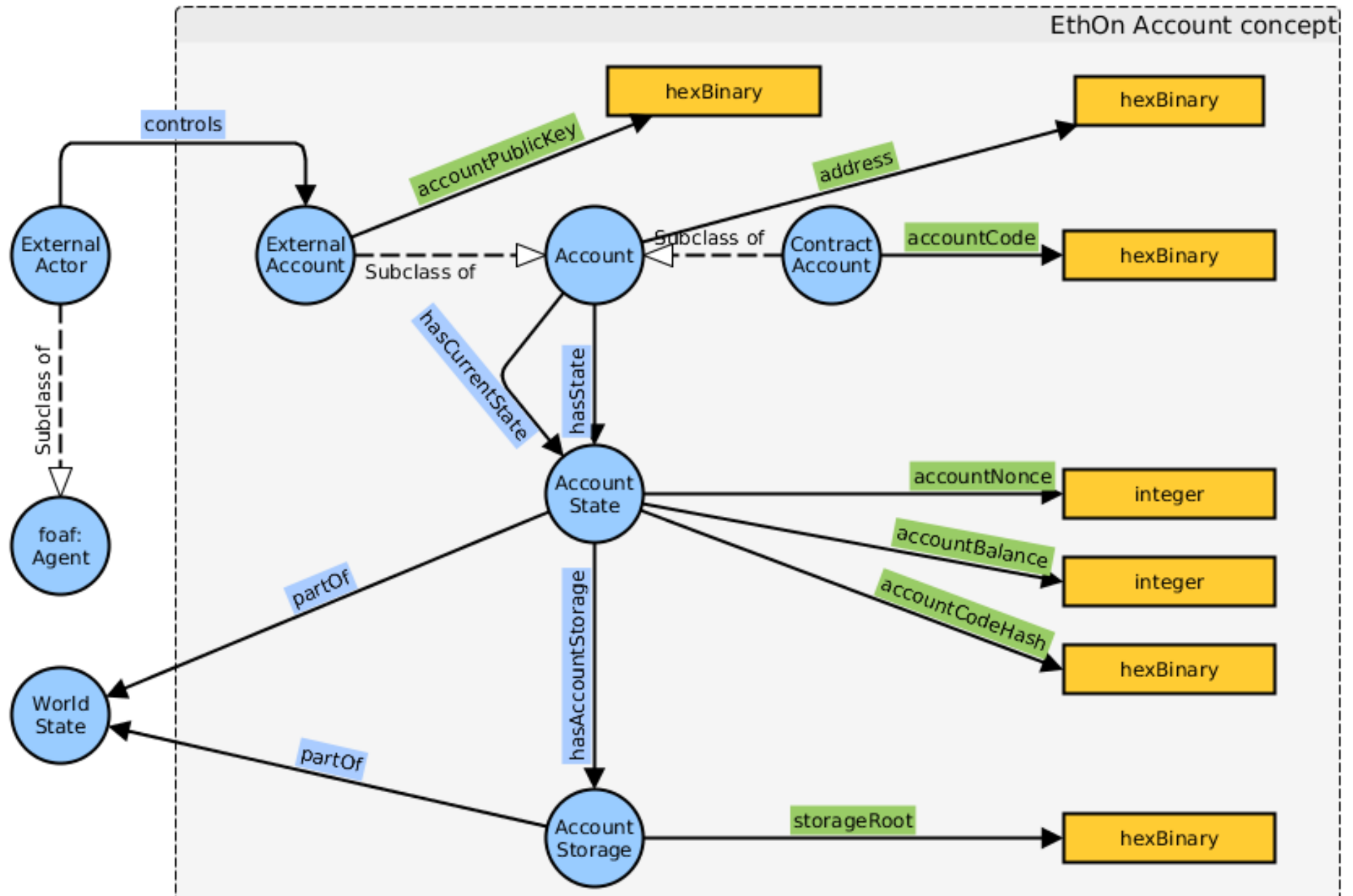
USD ▾

▲ #	Name	Market Cap	Price	Available Supply	Volume (24h)
1	 Bitcoin	\$16,719,335,950	\$1035.37	16,148,175 BTC	\$110,238,000
2	 Ethereum	\$1,010,753,634	\$11.40	88,623,729 ETH	\$5,615,910
3	 Ripple	\$237,042,666	\$0.006431	36,856,513,336 XRP *	\$347,942
4	 Litecoin	\$201,131,168	\$4.05	49,671,706 LTC	\$4,906,830
5	 Monero	\$178,554,812	\$12.85	13,896,181 XMR	\$2,126,980

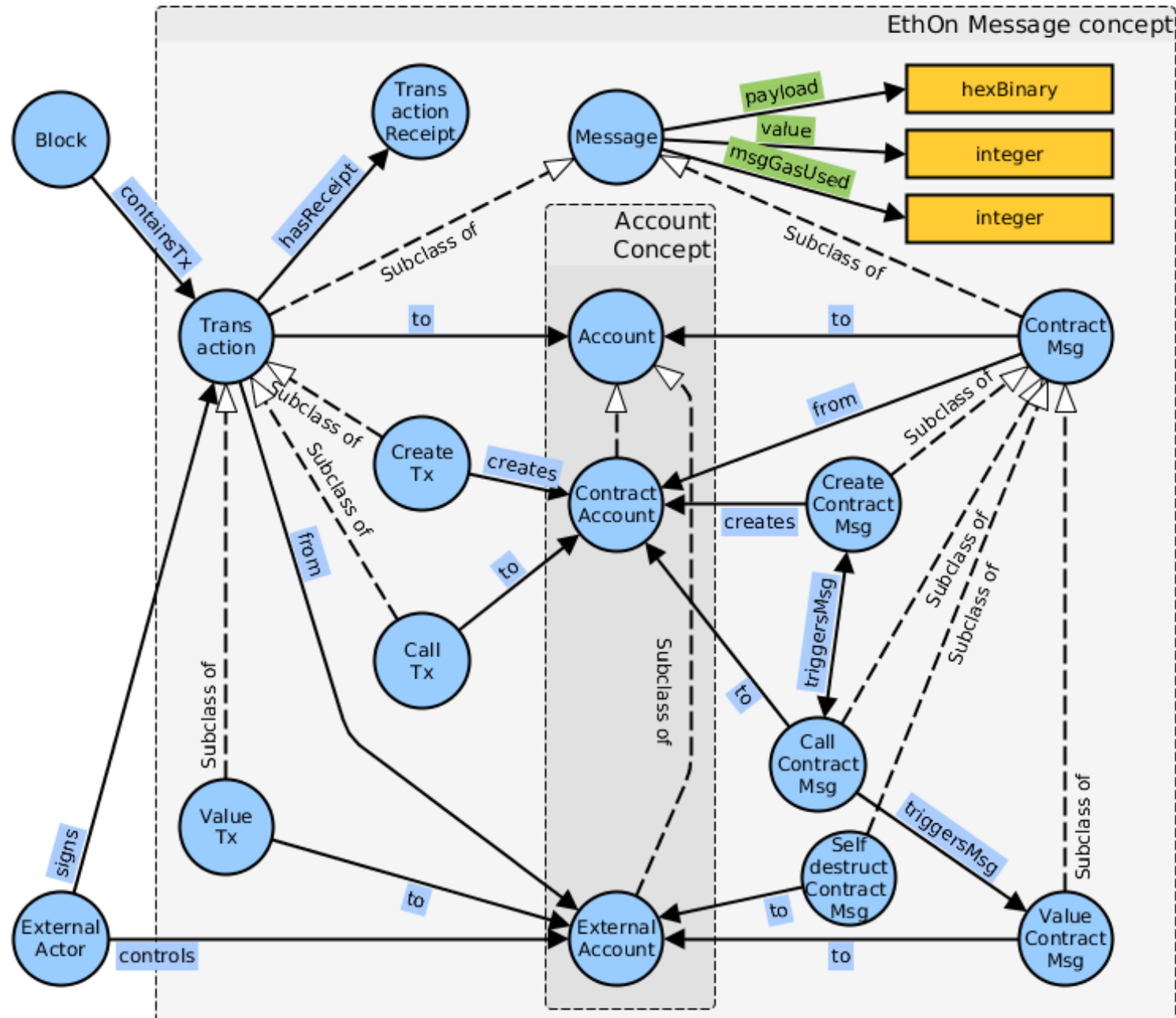
# Ethereum

- Transactions use 'ether'
- Code and data are part of the blockchain
- Deployment and execution occur in a VM (formally specified)
  - Each instruction costs 'gas' to prevent infinite loops
- Uses Proof of Work over P2P for consensus
  - 12-second block time
- Has undergone multiple forks, and a failed app

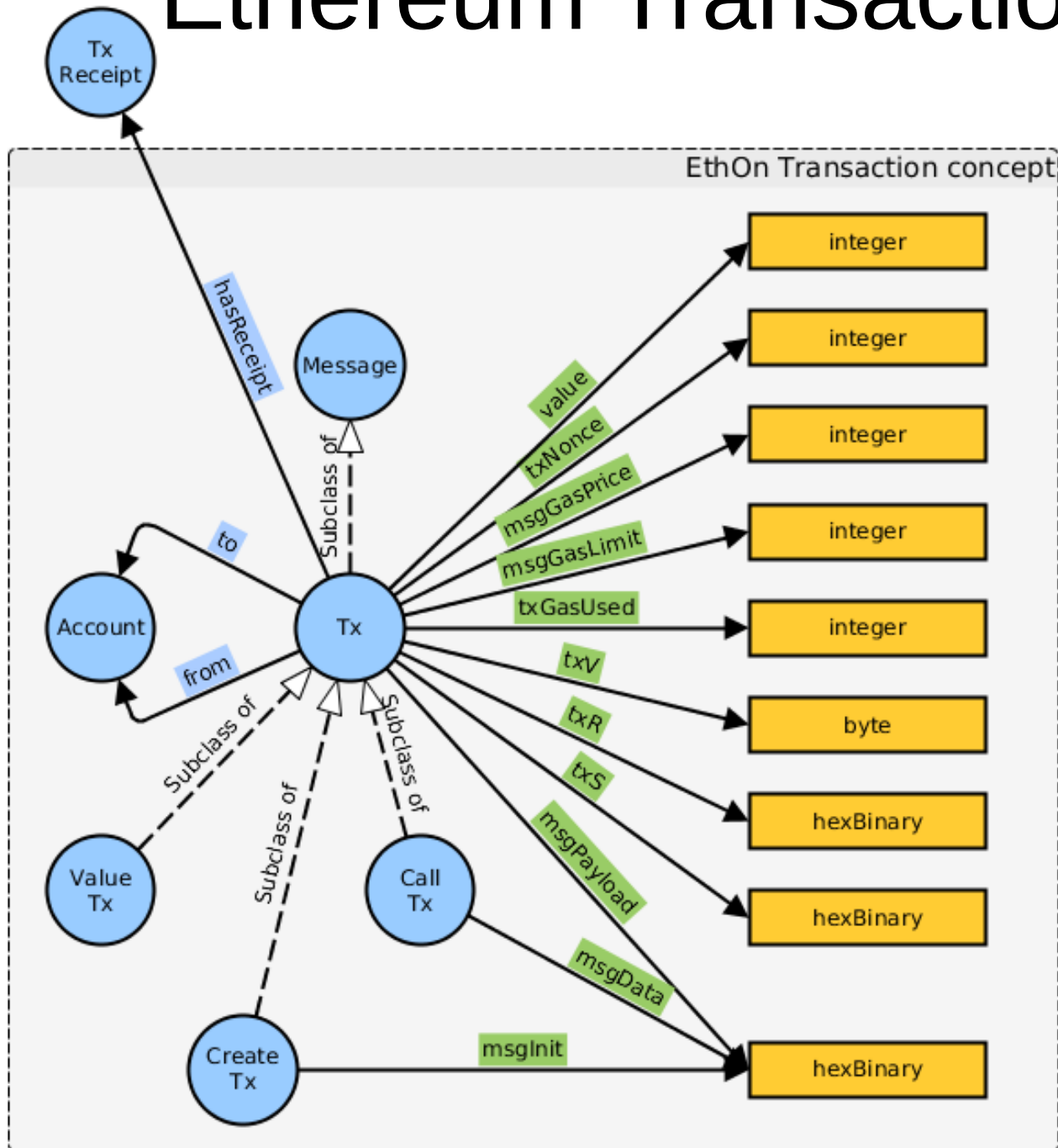
# Ethereum Accounts



# Ethereum Transactions



# Ethereum Transaction





# Other Blockchain Companies

- Microsoft: Bletchley, Ethereum
  - IBM: Fabric/Hyperledger
  - JP Morgan: Quorum
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- Ethereum's advantage: Distinct blockchain with billions of dollars of transactions
  - More interesting with code in VM, not just txs
  - Fast-growing community, including enterprise

# Goals

- Understand transactions and code execution that make up the public blockchain state
- Leverage that data for performance evaluations