

los angeles blockchain lab
Educate, Elevate, Innovate

Business of Blockchain



Overview - Blockchain Pillars

1. **UNDERLYING TECHNOLOGY**
2. Cryptocurrency
3. ICO
4. Mining



Anticipated Unknown Future

Internet



- Transmission Control Protocol / Internet Protocol
- Transmit Information
- Applications: Email & Internet Browser

Blockchain



- Distributed Ledger Technology
- Transmit / Record Information & Value
- Applications: bMoney, bValue



Trust Code, Not Institution

- Great Recession
- Oct. 2008, Satoshi Nakamoto "Bitcoin: A Peer-to-Peer Electronic Cash System"
- Internet Commerce relies exclusively on financial institutions, trusted third parties
- Solved “Double Spend” problem
- P2P distributed timestamp server using cryptography

Underlying Technology – P2P DISTRIBUTED LEDGER

Ledger

- Debits, credits, balance
- Time-stamped
- Auditable
- Should be trusted
- Centralized

Cash				
Date	Description	Debit	Credit	Balance
Jan. 1, 20X3	Balance forward			\$ -
Jan. 1, 20X3	Journal page 1	\$ 25,000		25,000
Jan. 4, 20X3	Journal page 1		\$ 2,000	23,000
Jan. 8, 20X3	Journal page 1	4,000		27,000
Jan. 18, 20X3	Journal page 2		500	26,500
Jan. 25, 20X3	Journal page 2	4,800		31,300
Jan. 28, 20X3	Journal page 2		5,000	26,300

P2P Distributed Ledger

- Electronic
- Time-stamped
- Auditable
- Immutable / Irreversible
- Decentralized P2P Network (Miners validate “cryptography”)

Underlying Technology -- SECURE

Hack Resistant

- Cryptography
- Hash Function Algorithms

No Single Point of Failure

Distributed

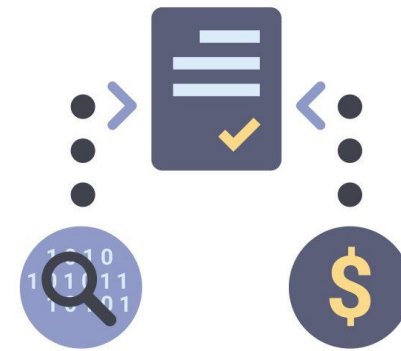
Trust

**P2P
Transparent**



Underlying Technology – SMART CONTRACTS

- Eliminate redundancy
- Streamline operations
- Near immediate response time
- Reduce overall costs
- Large amounts of transactions
- Integrate services no divulge sensitive information
- Ensure compliance



SMART CONTRACTS



Applications

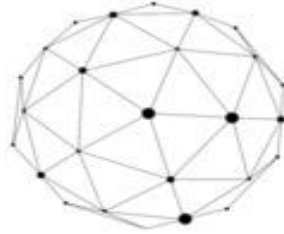
- Data Management / Audits
- Payments / Money Transfers
(*dis intermediate 3rd Party*)
- Quality Assurance
- Supply Chain Management
- Provenance
- Distributed Cloud Storage
- Identity / Fraud / Notary /
Proof of Ownership
- Voting

Challenges / Opportunities

1. Nascent, Fragmented Ecosystem -- Interoperability & Scalability
2. Regulatory Concerns
3. Financial Considerations (ICO)
4. General Awareness
5. Technical Skills

Resources

- Don Tapscott
“Blockchain Revolution”
- Michael Casey “The Truth Machine”
- “Banking on Bitcoin”
- CoinDesk, CCN
- “BlockchainBeach”
- Laura Shin “Unchained”
- Losangelesblockchain.org
- UCLA / UCI Extension / USC Events
- Blockgeeks
- GBBC
- DApperNetwork



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THANK YOU

