Blockchain Technology and IP

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Luxembourg, 26 April 2017
OVERVIEW

• Blockchain technology – what is it, where does it come from and how does it work?

• Opportunities and challenges in relation to intellectual property

• Limitations/open questions regarding the blockchain

• Looking into the future
DEFINITIONS, DEFINITIONS, DEFINITIONS

• An incorruptible digital ledger of economic transactions that can be programmed to record not just financial transactions but virtually everything of value (Dan & Alex Tapscott, Blockchain Revolution, 2016)

• A digital ledger in which transactions are recorded chronologically and publicly

• A distributed database, shared and continually reconciled

• A ledger (like an Excel spreadsheet), but it accepts input from lots of different parties

• An immutable distributed database of digital assets
At its heart: an asset database, which is

- Automated because of Algorithms
- Secure Cryptography
- Incorruptible Distributed
- Immutable No deletion
- Immediate; direct No intermediary
A SHORT HISTORY

• Satoshi Nakamoto: "Bitcoin: A Peer-to-Peer Electronic Cash System" 2008; 2010 first real-world transaction using Bitcoins; value (20/04/17): 1 BTC = EUR 1,135

• Other Fintech applications, exploring, inter alia, shorter transactions times and lower costs, know-your-customer applications etc.

• Business models outside the Fintech sector; use in the public sector
Voluntary nodes of distributed network maintain and develop the code.

Miners (nodes with high level computing power) compete in 10 minute intervals in aggregating and grouping the latest transactions into a cryptographically protected block.

Solution of the winning miner is validated by network, block is added to the chain by linking it to the previous block.

Transactions in the block are considered executed when block is added to chain.
A disruptive technology is one that displaces an established technology and shakes up the industry or a ground-breaking product that creates a completely new industry.
OPPORTUNITIES AND CHALLENGES FOR IP (1)

- Blockchain industry use of IP
- Non-blockchain industry use of the technology
- Registration and deposit systems concerning IP
- Blockchain used as vehicle of crime
• Blockchain industry use of IP
  – New start-ups being formed at rapid pace
  – Assess how to protect their innovations
  – Assure that they are not infringing IPR of third parties
OPPORTUNITIES AND CHALLENGES FOR IP (3)

• Non-blockchain industry use of the technology
  – Track and trace – supply chain protection
  – Digital IP rights management
• Registration and deposit systems concerning IP
  – Incorruptible and immutable nature of the technology
  – Examples: Delaware blockchain initiative, Estonian e-residency programme
  – Potential for IP register or deposit systems
OPPORTUNITIES AND CHALLENGES FOR IP (5)

- Blockchain used as vehicle of crime
LIMITATIONS/OPEN QUESTIONS REGARDING BLOCKCHAIN

- Maturity
- Governance
- Standardization
- Interoperability
- Costs
- Scaleable business models
LOOKING INTO THE FUTURE

- Digital identity
- Blockchain new generation
- Interoperability
- IOT
- High level of automation
Thank you