IMPACTS OF BLOCKCHAIN TECHNOLOGY ON INTELLECTUAL PROPERTY

Zhu Xiaolin
April 2018
CONTENTS

01  Trends in Blockchain-related Patent Application

02  Main Features of Blockchain

03  Impacts of Blockchain on Patents

04  Impacts of Blockchain on Other IPs
01. Trends in Blockchain-related Patent Application
Blockchain-related patent applications have a rapid growth

Patent Applications received by SIPO

- 2013: 9
- 2014: 15
- 2015: 39
- 2016: 426
- 2017: 709

Applicant Type Distribution

- Enterprise: 84%
- University: 12%
- Research Institute: 3%
- Others: 1%
Blockchain Applications are expanding from Financial Services to other areas, such as Internet of Things (IoT), Public Services, Supply Chain Management...
02. Main Features of Blockchain
MAIN FEATURES OF BLOCKCHAIN

- Blockchain
- Decentralization
- Openness
- Immutability
- Autonomy

TRUST
Could Blockchain Technology Change IP?
03. Impacts of Blockchain on Patents
Patent applications received by SIPO increase rapidly

SIPO is committed to enhancing examination quality and efficiency by intelligent examination systems and tools
PATENT CREATION & UTILIZATION

- **Pre-filing**
  - Innovation
  - Application

- **Examination Procedure**
  - Preliminary Examination
  - Substantive Examination
  - Granting

- **Post-granting**
  - Protection & Utilization
  - right confirmation
  - Identification
  - Evidence Preservation
  - Patent Transfer

**Blockchain Technology**
1. RIGHT CONFIRMATION

- Who is the real inventor?
- Who owns the right to apply for a patent?
- Hash with time-stamp proof of invention
- Smart contract proof of ownership

Blockchain Technology
2. IDENTIFICATION

Current Status
- Check manually
  - Inefficiency
  - Poor accuracy

Change of Applicant

Identification by Signature

Patent Office

Blockchain Technology
- Digital Multi-signature
- Smart Contract for Request

- Efficiency ↑
- Accuracy ↑
- Credibility ↑
3. EVIDENCE PRESERVATION

When was this necklace pendant up for sale?

Search

Time of Customer Comments
- Liable to be modified
- Uncertain

Screenshot
- Lack of authority
- Legal effect in dispute
3. EVIDENCE PRESERVATION

Merchandise Information on Chain

‘CREATIVE BOX’

Time-stamped
Authentic and reliable

Evidence Preservation

Internet evidence could be uploaded to blockchain for proof
4. PATENT TRANSFER

Current Problems

Information asymmetry

- Low efficiency
- High cost of information verification
- Uncertain risks
4. PATENT TRANSFER

- Providing shared, transparent and traceable histories
- Reducing cost of information collection, intermediary and decision-making
- Reducing disputes and risks by the self-executive smart contracts
04. Impacts of Blockchain on Other IPs
TRADEMARK REGISTRATION

Current Problem

- Preemptive trademark registration by improper means

Blockchain Technology

- Recording the prior use on the chain
- A proof of prior use with time-stamp
- Safeguarding legal rights and interests
COPYRIGHT PROTECTION

Current Problems

- Registration: time-consuming, high costs
- Right Protection: difficult to collect evidence
- License: via a third party

Blockchain Technology

- ‘Digital ID card’
- Clear and traceable transaction data
- Peer to peer contact between Authors and users
COPYRIGHT PROTECTION

Commercial Platform: ‘ORIGINAL’

- Digital DNA: Unique ID for each work
- Access to law firm and notary public office
- Automatic detection of infringement
- Reproduction authorization

Copyright Protection Center of China (CPCC) DCI system

- DCI code: Unique ID Certificate of registration
- Copyright Registration
- Fee Accounting
- Evidence collection
- Benefit-sharing mechanisms
- Fighting against pirates
GEOGRAPHICAL INDICATION PRODUCT PROTECTION

Current Problems

- Lack of supervision for product transfer data
- Difficulty of tracing product origins

Blockchain Technology

- Transfer data maintained by multi-node, being immutable
- Origin information saved on chain, being traceable
GEOGRAPHICAL INDICATION PRODUCTS PROTECTION

Products Tracked by Blockchain

MOUTAI, Moutai, China

Milk Powder, New Zealand

Producer

Data maintained by all nodes

Consumer

Dealer
Blockchain technology could be used in the field of intellectual property to solve the issues involving trust, and provide more efficient, convenient, and reliable ways for the creation, protection, and utilization of intellectual property.
THANKS!