CWS/9 Agenda Item 7(b)  
“Report on the Blockchain Whitepaper for IP ecosystem”
Topics for discussion

- Objectives and composition of the Whitepaper
- Preparatory activities
- Key features of Blockchain and Blockchain Rationale
- Overview of IP ecosystems and Blockchain uses
- Potential Blockchain applications in IP ecosystems
- Key findings and Considerations & Areas of future works
- Mockup: Decentralized Identifiers
Main objectives of Whitepaper

- Gather information on how blockchain is perceived in general and within IP community
- Explore the opportunities and challenges of using blockchain technologies for IP
- Analyze implications of blockchain applications in IP space
- Identify potential applications of blockchain in IP ecosystems
- Support the Blockchain Task Force
- Suggest recommendations for consideration
Whitepaper consists of

- Executive Summary & Main body with 4 Annexes
- Annex I: Overview of IP ecosystems
- Annex II: Survey results
- Annex III: Potential use cases
- Annex IV: Mock-up DIDs
Preparatory Activities

Desk Research on BC based applications:

- Projects/initiatives/research works related to IP in the last 4 years
- Applications are being used or explored around the globe in all IP value chain, but still in PoC or pilot

Survey: 139 responses from IPOs and IP industry

- Questionnaire: 6 sections and 64 questions
- Majority of participants work in IP legal services (40%) and management (31%) focusing on the protection and management phases of the IP ecosystem.

Interviews with 10 organisations and entities
Whitepaper Webinar and Publication

Webinar on WIPO blockchain whitepaper

• Webinar toward launch of the whitepaper held on September 28, 2021

CWS/9 - factual information checking

• Feedback from one CWS member on the whitepaper mainbody
• Improvement on Annexes III and IV

Publication in November 2021
Key features of Blockchain

- Decentralization, distributed ledgers, consensus mechanisms, immutability of records and encryption

- Tokenization, Smart Contracts, Automation and Self-Sovereign Identity (SSI)
Blockchain Rationale in IP ecosystems

Some major issues in IP business operations

• Process of managing IP is time-intensive and costly
• Uncertainty in the data and distrust of the competition
• Multiple and incomplete data sources

Opportunities:

• One version of “the truth” of IP assets
• Increase accuracy, efficiency, verifiability, transparency and public access
Blockchain use in IP ecosystems

A. IP Application
B. Issue/Certify IP Right
C. Store evidences of IP assets
D. IP Application providing proof of ownership
E. Request/Verify the IP Right ownership
F. Request/Respond an IP Right usage
G. Sign and register the contract in the BC Register

IP Authority

IP Generator / Applicant / IP Holder

Verifying Institution

IP Blockchain Register

IP Buyer

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## Potential Applications in IP ecosystems

### Horizontal Uses
- Digital Identity
- Trust data sharing
- Timestamping
- Proof of existence of intellectual assets
- Provenance authentication

... Many others

### Vertical Uses
- IP Registers
- Evidence of trademark use
- IPR Transfer/Licensing
- IP Ownership Management
- IPR Enforcement
- Priority doc exchange

... Many others
Key findings (1/2)

- Blockchain is impacting every industry
- Cultural transformation as well as technological transformation toward a programmable society
- Hype seems over, but Blockchain is still at its early stage
- Numerous blockchain initiatives at international level and in IP space
Key findings (2/2)

- Disrupting and complementing IP business operations
- Various opportunities and challenges identified
- Common identification of IP assets and entities
- Importance of Verifiers’ role
Main Considerations

- Technical Standards
- Governance
- Regulatory framework
- Collaboration and capacity building
Annex IV: Mockup
Decentralized Identifiers (DID)

This mock-up has been built around the concept of using decentralized identifiers of a legal entity/individual and demonstrates the suitability of blockchain-based technologies for the use of identifiers in the lifecycle of an IP asset.

Decentralized identifiers (DIDs), implemented via blockchain, enable a verifiable decentralized identity (credentials) to allow an object – defined by the owner of the identity – (person, company, abstract identity, etc.) to be identified.
Business Rationale

DID with legal validity provide multiple benefits:

• Trust between entities
• Improvement of the efficiency of operations
• Reduction of complexity by providing more seamless and streamlined service experience, removing duplication, and making online transactions easier
• Standardized procedure of identification, agreed by network consensus (vs central authorities);
• Private entities control their identity and the information they share in each operation/transaction
• All the network Entities are able to see the claims made against other legal entities (non-GDPR protected).
7 Use Cases

➢ ASSIGNMENT AND MANAGEMENT OF DID
  ➢ Issue of a new DID to Applicant
  ➢ IP Offices’ Management of Existing WIPO DIDs
  ➢ A User loses his/her digital identity

➢ PATENT LIFECYCLE
  ➢ Timestamping on a pre-filing data lab notes
  ➢ Filing Patent Application
  ➢ Change of ownership of IP Right
  ➢ IP owner licenses a patent
Use Case: Issue of a new DID

Assignment of a new DID to Applicant

Applicant → Request for a new WIPO DID → IP Office

Request for National ID as evidence of identity → Provide evidence: Passport, national identity, ...

Formality check → Create new WIPO DID → Register initial claims about DID (National ID, passport)

 WIPO BC Network

Applicant → WIPO BC Network
Use Case: Patent Application Filing
Areas for future work

- Cooperate and coordinate discussions on Regulation, Governance and Standardization
- Develop a new WIPO Standard on Blockchain for IP ecosystems
- Collaborative pilot projects
- Collaboration for capacity building
- Public-Private Partnership
Questions

Thanks for your attention!

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