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Report on the Blockchain Workshop

CWS/7 Agenda Item 7(b)

Geneva, July 1-5, 2019

Overview

- Objectives
- Workshop Program
- Blockchain Opportunities and Challenges
- Blockchain Potentional Use Cases in IP
- IP Offices Proof of Concepts (PoC) Examples
- Recommendations
- Further works

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Background

- CWS/6 created Task No. 59 and establisehd the Blockchain Task Force
- CWS/6 agreed that the International Bureau organize an event on blockchain in 2019, inviting CWS Members and any interested parties.
- In the era where various new technologies emerge and such technologies evolve very rapidly, it is important that the standardization aspect is considered at an earlier stage of the technology evolution than before.
- Such early consideration is critical to achieve the efficient harmonization though effective standardization.

Objectives

- Bridge IP community and blockchain community to discuss how to leverage the technology for IP and identify business cases in IP that could potentially benefit from blockchain technology.
- Explore appropriate roles for the public and private sectors in potential uses of blockchain for the IP ecosystem.
- Offers the opportunity to share lessons learned.
- Discuss areas for standardization of IP data for blockchain.

Workshop Program

- Two day workshop
  - Day 1: general feature and use of blockchain
  - Day 2: blockchain for IP
- The program consisted of presentations and interactive panel discussions participated by various speakers and panelists from IP offices, Blockchain/IP industries, UN Organizations, intergovernmental organizations
- Materials, including video and photos, available in WIPO website: https://www.wipo.int/meetings/en/details.jsp?meeting_id=51407

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Potential Opportunities

- Immutable and verifiable transactions recorded in a blockchain can eliminate paper
- Reducing costs: automate middle-man services
- Increasing traceability
- Improving customer experience
- Verifying ownership and proving identity
- Enhancing security

Potential Challenges

- Performance / Scalability
- Regulation
  - governing laws and jurisdictions, enforceability of smart rights, data security and privacy concerns, reliable rules and definitions for smart contracts
- Interoperability among various platforms: standardization
- Privacy: confidential data

Potential use cases in IP

- evidence of inventorship: replacing lab notebooks
- evidence of creatorship and provenance authentication, registering and clearing IP rights;
- evidence of genuine and/or first use in trade and/or commerce;
- tracking the distribution of (un)registered IP;
- digital rights management (e.g., online music sites);
- establishing and enforcing IP agreements, licenses or exclusive distribution networks through smart contracts;
- detection and/or retrieval of counterfeit, stolen and parallel-imported goods

"Smart" IP rights and registries

- Centralized solution connected via Blockchain (one global IP registry) - which would create an immutable record of events in the life of a registered IP right.
- Robust and trustworthy proof of events in the life of a registered IP right
  - e.g. when a trademark was first applied for, registered, first used in trade; when a design, trademark or patent was licensed, assigned, and so on. It would also resolve the practicalities of collating, storing and providing such evidence.
- Saving time, resources and money
  - Simplifying IP audits and due diligence
- Licensing, assignments, chain of title…
- Issue of confidential data ← → Open or private blockchain

Evidence of use of IP rights

- Evidence of use of a trade mark (e.g. evidence of acquired distinctiveness/secondary meaning; defending non-use revocations; renewal; incontestability, etc.)
- Data updated and notified to smart IP Registry virtually immediately on the occurrence of a verified event
- Lower the burden of cost and administration collecting relevant evidence
- Issues: confidentiality of sensitive business data (private vs public blockchain); interoperability of blockchain solutions

Certification and collective marks

- Collective marks: for use by a specific group of enterprises, e.g. members of an association
- Certification marks: for use by anybody who complies with the standards defined by the owner (i.e. products meet certain established criteria or standards, e.g. Woolmark)
- Fake certificates can almost immediately be identified
- Entity that applies for registration is considered "competent to certify" the products
- Issue for both: public nature of traditional open blockchain;

Evidence of creatorship

- Enforcement of unregistered IP rights ("bridge the gap"): difficulties of proving ownership of unregistered trade marks, unregistered designs, goodwill, copyrights
- Evidence of conception, use, status, qualification requirements (such as originality and the country in which articles made to design were first marketed)
- Original design document and details of designer on blockchain create timestamped record and evidence
- Deterrent for infringers
- Some start-ups developed blockchain applications

Smart Contracts and digital rights management

- Often cited in the context of blockchain
- Programmable transactions — computerized transaction protocols that recognize fulfilment of conditions and automatically execute terms of a contract
- Digital Rights Management: (micro-)payments to IP owners in real time
- “smart information” about IP rights in protected content (e.g. a song or an image) could be encoded in digital form (in a music or an image file).
- Issues: no universal definition & delay in payments

Anti-counterfeiting and enforcement

- Blockchain ledgers holding IP rights and related information: who owns what, when and where products are made, and details about their manufacturing process and sources of raw materials, etc
- Ledgers would enable everyone in the supply chain, including consumers and customs authorities, to validate a genuine product and distinguish it from a fake.
- Scannable tags or chips immutable information (cf. QR codes and NFC tags)
- Rethinking customs programs to prevent global trade in counterfeits - won't change attitude of those that intentionally buy fakes

Tracking Goods in the Supply Chain

Why (private) blockchain

- Obtain a secure record of the entire supply chain
- Information on when and where a product is made, processed, shipped, storage conditions etc.
- Speed up administration
- Valuable supply chain information not visible to competitors

How does it work?

- At each step, all parties verify the existence and conditions of goods
- Information is digitally linked to goods

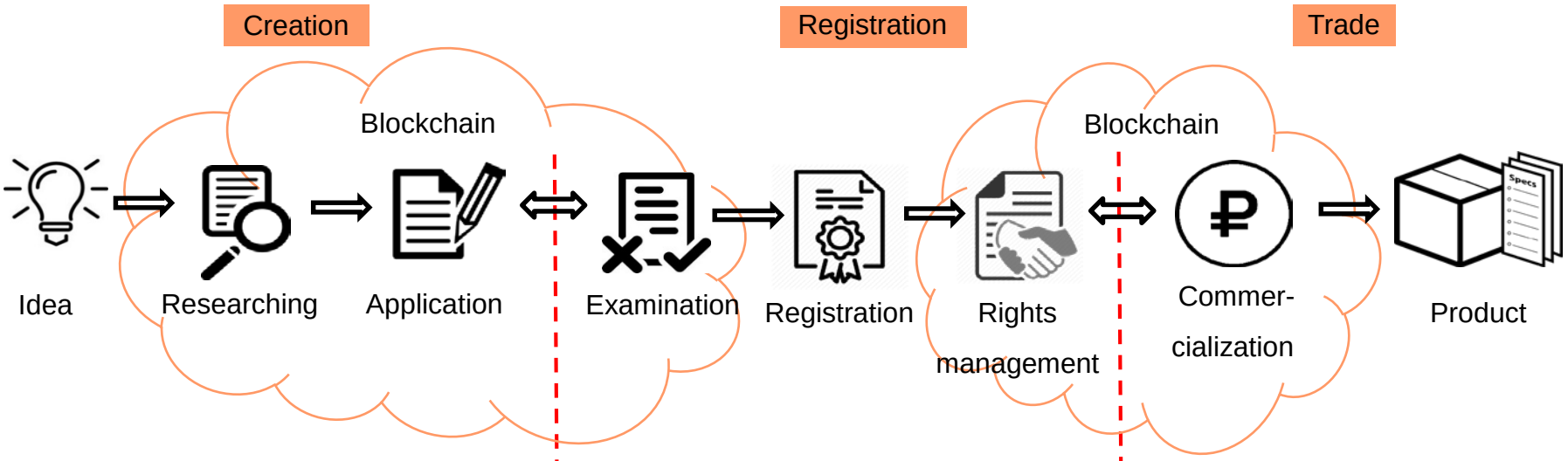
Remaining problems:

- Every party at every step must be involved
- Differences between "real world" and digital world
- Who pays and what will incentivise everyone to play their part?

Trade Secretes

- Alternative to innovation patents
- Conditions: information which is (i) secret, (ii) has commercial value and which (iii) has been subject to reasonable steps to keep it secret , only valuable to they extent they are kept secret
- Proof that information has been kept secret in case of misappropriation (encryption, hashing, proof of existence)
- Means of securely sharing information with third parties
- Blockchain as secure means of sharing trade secrets: "Non-Disclosure Agreements"

Rospatent PoC: IP rights creation chain



Participants:

- Inventors
- Applicants
- Patent Attorneys

Participants:

- National IP offices

Participants:

- Owners
- Investors

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IPA PoC – Smart Trademark (1/2)

Business Problem

No mechanisms for real-time enforcement

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Creates ease of replicating trade marks on products and digital applications

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With limited visibility of supply in export markets

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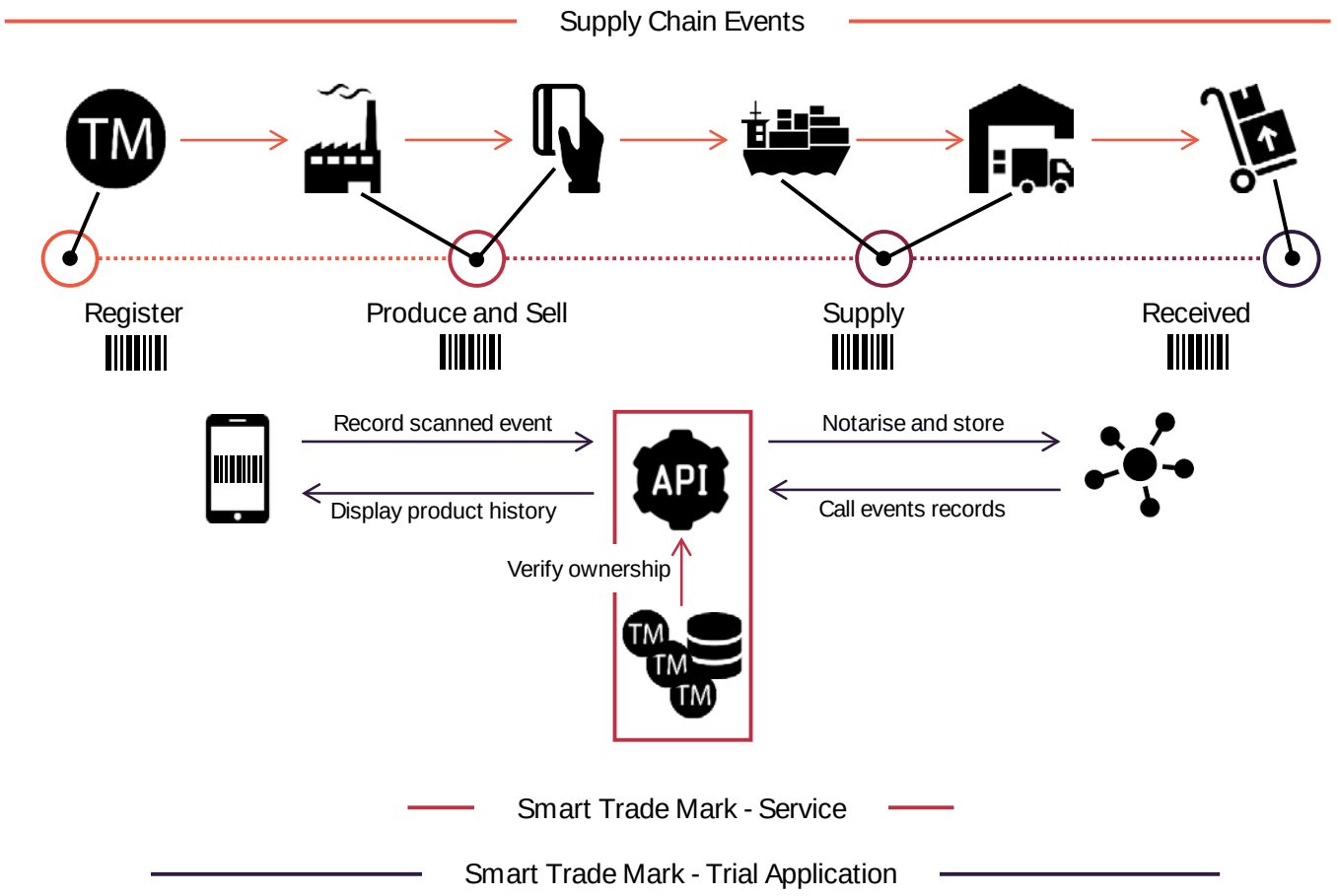
This leads to counterfeit goods that deteriorate Australian brands

IPA PoC– Smart Trademark (2/2)



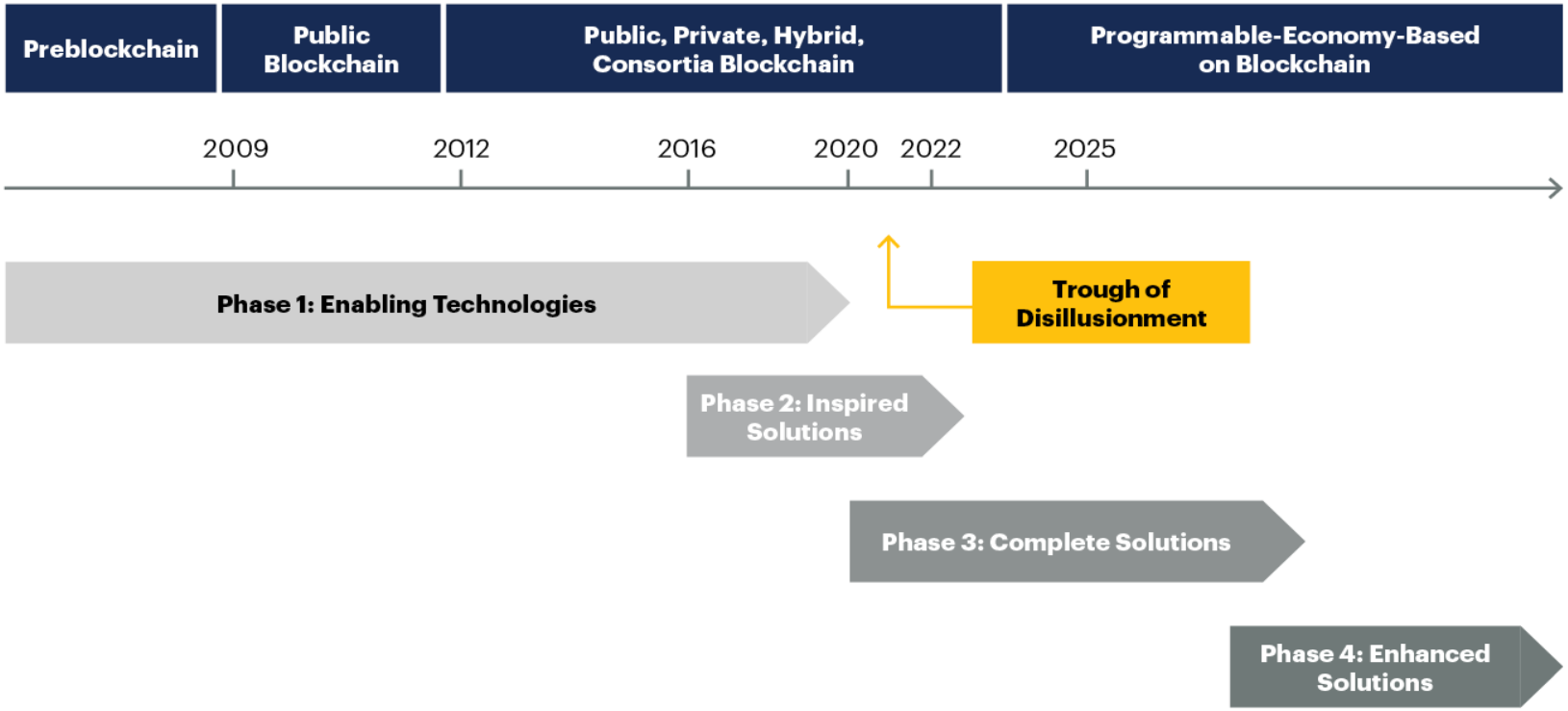
Recommendations (1/2)

- Focus on standardizing the IP data to be stored on/off a blockchain, rather than trying to standardize technology stacks
- Work with other standardization bodies, e.g. ISO and ITU
- Collaborate with existing blockchain technical communities to ensure that the standards WIPO develops are useful and compatible with blockchain implementations.
- WIPO engage with the broader Blockchain community of experts through platforms the community already uses, such as GitHub

Recommendations (2/2)

- Identity management is a difficult problem that goes far beyond the world of IP;
- Blockchain applications, such as supply chain management, smart contracts, and property registers, require some form of identity management
  - WIPO and IPOs should work with the broader community addressing identity management issues, rather than creating a separate identity solution that only works for IP ecosystem
- Ensure interoperability between Blockchain–enabled systems
- Governance, e.g., Identity, interoperability

Gartner's Blockchain Spectrum



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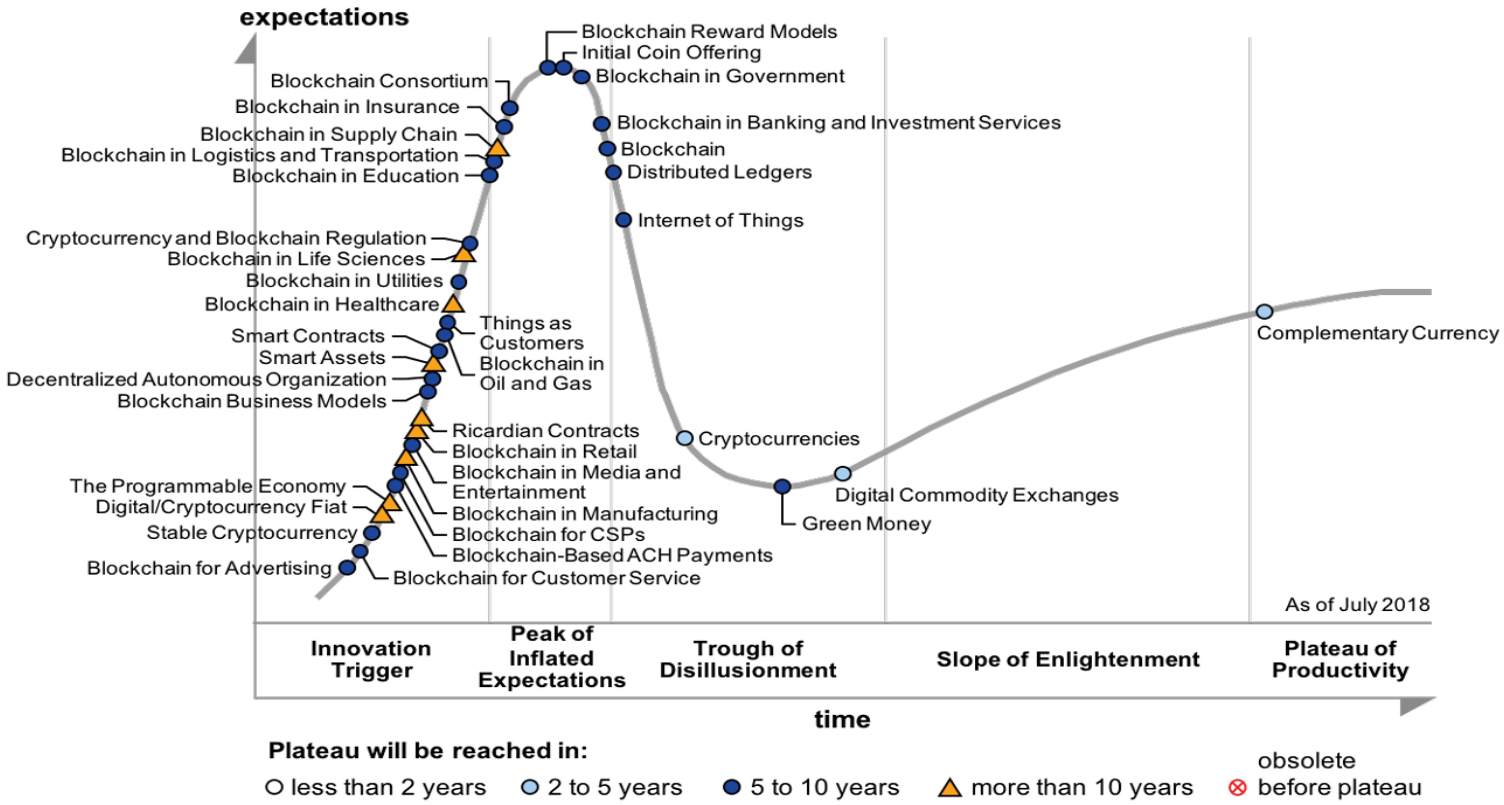
Hype Cycle for Blockchain Business, 2018



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Suggestions for further works

- White Paper on IP Ecosystem Processes
  - Presenting the functionalities blockchain offers that can’t be achieved by other means
- White Paper on Standards
  - Considering relationships with current standards
  - Studying what new standards are necessary
- Use Cases in IP space
  - Identifying use cases in specific IP domain
  - Identifying use cases applicable accross domain

Thank you for your attention!