



Australian Government

IP Australia



Blockchain Task Force

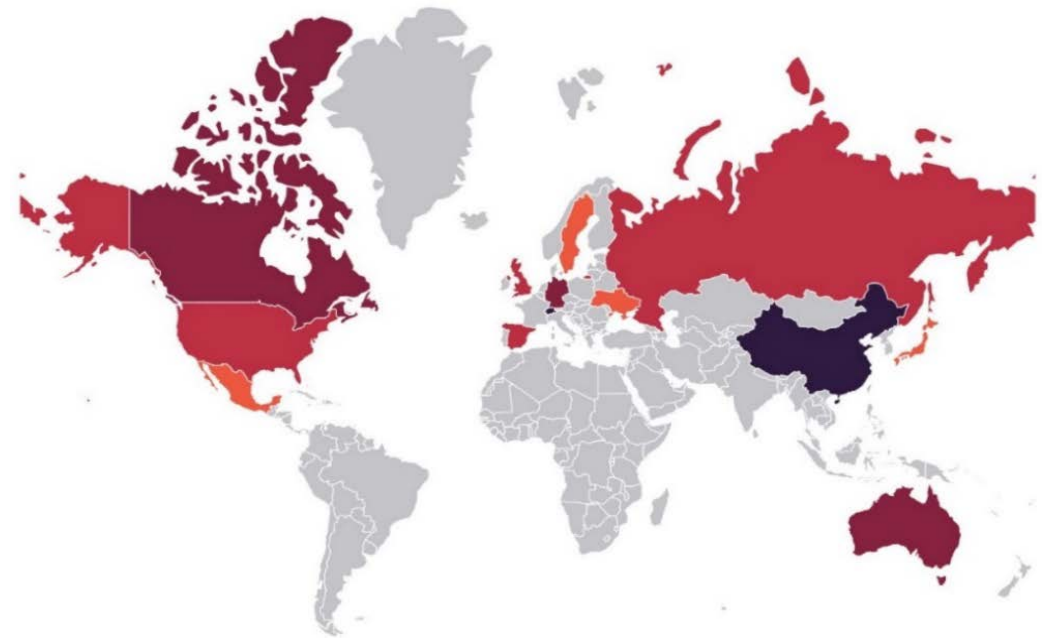
Task Force Progress Report- 1 July 2019

Geneva

Task Force leaders: IP Australia and Rospatent

Task Force progress report

- Proposals made by IP Australia and Rospatent to establish Blockchain Task Force at CWS/6
- Task Force formation agreed at CWS/6 with IP Australia and Rospatent designated co-leaders
- New Task created – Task No. 59
 - Explore
 - Collect
 - Develop and;
 - Prepare
- Circular C.CWS.108 issued to member states
- 14 responding IPOs (inclusive of the IB)
- Task Force wiki established
- Task Force members welcomed



Task Force progress report (2)

- Task Force workplan (2018/2019) and roadmap disseminated
- Task Force objectives and draft standard scope statement posted for comment on wiki
- Round 1 discussions commenced - January 2019
 - Collect information about Task Force members developments in use of and experience with Blockchain
- Issued Blockchain Task Force members questionnaire / survey and received responses
- Assisted WIPO in planning and preparation of Blockchain workshop in Geneva
- Held Task Force meeting in Geneva – May 2019



Summary of Task Force member responses to survey

High value opportunity



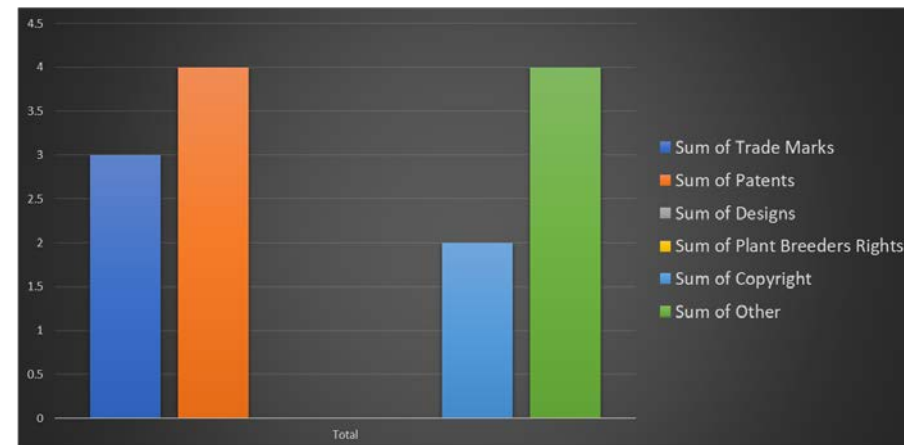
Activities by organisation



Suggested joint projects



Activities by IP Right



Summary of Task Force member responses to survey (2) – Standardisation Candidates

Terminology and Definitions

- Vocabulary dictionary
- Glossary of terms

Technologies and Interoperability

- Platform
- Security
- Types e.g. Smart contracts
- Coding language

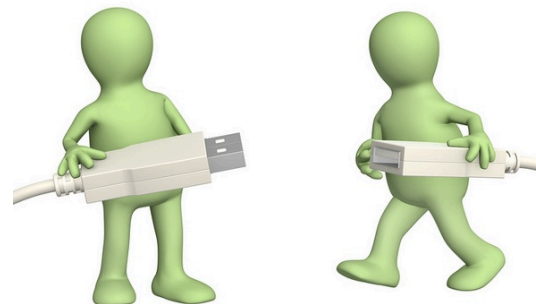
Data

- On chain or off the chain
- OPI or non-OPI
- WIPO Standards e.g. ST.3

Participation

- Governance
- Consensus
- Identity management
- Public, Private, Permissioned

Standard provides reference models and business cases for application



Task Force Meeting – May 2019

Agenda focus

- a) A review of the WIPO Blockchain workshop outcomes
- b) Review and Discussion on the objective and scope of a new WIPO standard on blockchain.
- c) Review and Discussion on Task Force member responses to survey on "use of and experience with blockchain"
- d) Discussion of Standard Objectives and Inclusions for Standard Table of Contents
- e) Future work, Industry guidance and potential use cases for proofs of concept projects

Review and Discussion on Task Force objective and scope of a new WIPO standard on blockchain

Objectives of Task Force:

- a) Explore the possibility of using blockchain technology in the processes of providing IP rights protection, processing information about IP objects and their use;
- b) Collect information about IPO developments in use of and experience with blockchain, assess current Industry Standards on blockchain and consider merit and applicability to IPOs;
- c) **Develop reference models of using blockchain technology in the IP field**, including guiding principles, common practice and use of terminology as a framework supporting collaboration, joint projects and proofs of concept; and
- d) **Prepare a proposal for a new WIPO standard supporting the potential application of blockchain technology within the IP ecosystem.**

Standard scope statement:

- This Standard aims to guide the Intellectual Property Offices (IPOs) and other Organizations that need to manage, store, process, exchange and disseminate IP data using Blockchain. It is intended that by using this Standard, **the implementation** of Blockchain can be simplified and accelerated **in an interoperable manner within the IP ecosystem.**

Proposed standard title:

- RECOMMENDATIONS FOR THE APPLICATION OF BLOCKCHAIN TECHNOLOGY WITHIN THE IP ECOSYSTEM

Discussion of Standard Objectives and inclusions for Standard Table of Contents

Draft Standard Objectives

1. For Intellectual Property Offices and other organizations to manage, store, process, exchange and disseminate IP data using Blockchain in an interoperable manner.
2. To provide a governance framework to support the IP ecosystem in blockchain adoption and use.
3. To provide guiding principles, common practice and use of terminology to support collaboration and blockchain initiatives

Draft Table of Contents

TABLE OF CONTENTS	
1. INTRODUCTION.....	1
<i>[Describe the objectives of the standard.]</i>	
2. DEFINITIONS AND TERMINOLOGY.....	2
<i>[Define all terms and definitions used in this standard.]</i>	
3. SCOPE OF THE STANDARD.....	3
<i>[Define the Scope of this standard.]</i>	
4. WORKING PRINCIPLE.....	4
<i>[Describe Working principle of Blockchain Technology as well as consensus mechanism principle.]</i>	
5. ASSESSMENT OF CURRENT INDUSTRY STANDARDS AND PRACTICES ON BLOCKCHAIN.....	5
<i>[Provide an assessment of current industry standards and practices.]</i>	
6. REFERENCES.....	6
<i>[Define all WIPO and other international standards used in this standard.]</i>	
7. GENERAL RECOMMENDATIONS.....	7
<i>[Define general industry and IPOs` practices and prepare general recommendations on which data should be stored in the Blockchain.]</i>	
8. RECOMMENDATIONS ON BLOCKCHAIN PLATFORMS.....	8
<i>[Describe and recommend existing Blockchain Platforms and their providers.]</i>	
9. PRACTICAL RECOMMENDATIONS.....	9
<i>[Define specific practices and prepare practical recommendations for IPOs.]</i>	
10. RECOMMENDATIONS ON REQUIREMENTS AND TOOLS.....	10
<i>[Define requirements and tools necessary for using Blockchain.]</i>	

Note: This should leverage TF member opinions on candidates for standardization as well as learning offered and gained from Industry experts e.g. Standards Australia / ISO and ISO/TC 307

Draft Table of Contents annotated during the TF meeting

STANDARD ST.??
RECOMMENDATIONS FOR THE APPLICATION OF
BLOCKCHAIN TECHNOLOGY WITHIN THE IP
ECOSYSTEM

TABLE OF CONTENTS

1. INTRODUCTION 1

[Describe the objectives of the standard.]

e.g. These recommendations provide guidance for Intellectual Property Offices and other organizations on how:

1. **To manage, store, process, exchange and disseminate IP data using Blockchain in an interoperable manner.**
2. **To provide a governance framework to support the IP ecosystem in blockchain adoption and use.**
3. **To provide guiding principles, common practice and use of terminology to support collaboration and blockchain initiatives.**

2. DEFINITIONS AND TERMINOLOGY 2

[Define all terms and definitions used in this standard.]

e.g. Vocabulary dictionary and Glossary of terms for the purpose of this standard:

- i. **A blockchain**, originally block chain, is a growing list of records, called blocks, which are linked using cryptography. Each block contains a cryptographic hash of the previous block, a timestamp, and transaction data
- ii. **A consensus algorithm** ensures that the next block in a blockchain is the one and only version of the truth and it keeps powerful adversaries from derailing the system and successfully forking the chain.
- iii. **Cryptography** is the encryption and decryption of data. There are two main cryptographic concepts used in Blockchain, Hashing and Digital Signatures. In general, there are three forms of encryption that are widely used, symmetric cryptography, asymmetric cryptography, and hashing.
- iv. **Decentralization** means the network operates on a peer-to-peer basis. A global network of computers use blockchain technology to jointly manage the database that records transactions instead of one central server.
- v. **Digital Signatures** are a way to prove that somebody is who they say they are. A digital signature is a way to prove that a message originates from a specific person and no one else. When you visit a website, you are using SSL. This uses a digital signature to establish trust between you and the service.
- vi. **Distributed ledgers** are a type of database that are spread across multiple sites, countries or institutions. Distributed ledger data can be either "permissioned" or "un-permissioned" to control who can view it.
- vii. **Encryption** is the process of turning a clear-text message (plaintext) into a data stream (cipher-text), which looks like a meaningless and random sequence of bits.
- viii. **The hash function** transforms the digital signature, then both the hash value and signature are sent to the receiver. The receiver uses the same hash function to generate the hash value and then compares it to that received with the message. If the hash values are the same, it is likely that the message was transmitted without errors.
- ix. **Immutability** means a block cannot be modified after it is created. In Blockchain, blocks are chained together so that you can't go back and change the contents of a block without having to change every subsequent block. Depending on the consensus protocol, you can't change blocks without everyone else agreeing to it. This is sometimes referred to as "mutable by consensus".
- x. **A node** is any computer that connects to the blockchain network.
- xi. **Permissioned Blockchain networks** allow the network to appoint a group of participants in the network who are given the express authority to provide the validation of blocks of transactions. Or, to participate in the consensus mechanism.
- xii. **Smart contracts** are contracts whose terms are recorded in a computer language instead of legal language. Smart contracts can be automatically executed by a computing system, such as a suitable distributed ledger system.
- xiii. **Peer-to-peer (P2P)** refers to the decentralized interactions that happen between at least two parties in a highly interconnected network. P2P participants deal directly with each other through a single mediation point.

3. SCOPE OF THE STANDARD 3

[Define the Scope of this standard.]

e.g. The following scope statement was proposed during the Task force meeting basing on the objectives of the Task force:

- a) Explore the possibility of using blockchain technology in the processes of providing IP rights protection, processing information about IP objects and their use;
- b) Collect information about IPO developments in use of and experience with blockchain, assess current Industry Standards on blockchain and consider merit and applicability to IPOs;
- c) Develop reference models of using blockchain technology in the IP field, including guiding principles, common practice and use of terminology as a framework supporting collaboration, joint projects and proofs of concept; and
- d) Prepare a proposal for a new WIPO standard supporting the potential application of blockchain technology within the IP ecosystem.

This Standard aims to guide the Intellectual Property Offices (IPOs) and other Organizations that need to manage, store, process, exchange and disseminate IP data using Blockchain. It is intended that by using this Standard, the implementation of Blockchain can be simplified and accelerated in an interoperable manner within the IP ecosystem.

4. REFERENCES 4

[Define all WIPO and other international standards used in this standard.]

e.g. The following WIPO and other International Standards should be applied as referenced in this standard:

- a) ISO/TC 307, Blockchain and Distributed Ledger Technologies
- b) WIPO Standards

5. TECHNOLOGY AND INTEROPERABILITY 4

[Describe common principles and features of the Blockchain technology]

e.g. The description of the following Blockchain technology aspects:

- Platform – As IPOs we need to consider the platforms leveraged (we will not prescribe using any particular platform)
- Security
- Types e.g. Smart contracts, DLT
- Coding language (we will not prescribe coding languages)

6. GENERAL RECOMMENDATIONS 6

[Define general recommendations on which data should be stored in the Blockchain as well as participation issues.]

e.g. **Data**

- On chain or off the chain – Which data should be stored on chain and off the chain
- OPI or non-OPI – Does non-OPI data stay off chain and is accessed on demand via secure APIs
- WIPO Standards e.g. ST.3

Participation

- Governance
- Consensus – Standard should consider consensus mechanisms, how does validation work as well as blockchain ownership stake i.e. no IPO with greater than 50% hold
- Identity management – Who outside of IPOs would have access to particular blockchain solutions
- Public, Private, Permissioned – Do we use fully private platforms with one 'single highly-trusted entity' to verify transactions e.g. WIPO or do we leverage publically run blockchains or private permissioned blockchains

7. IP ECOSYSTEM 10

[Description of "IP ecosystem" collaborative environment.]

e.g. Flow chart – is blockchain fit for me etc....

Legislation
Privacy
GDPR

Use Cases

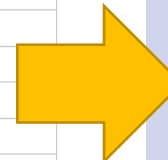
No.	Theme	Use Case(s)
1	IP Rights processing	<ul style="list-style-type: none">• Smart contracts for service requests, e.g., PPH• Priority data / provisional filing• Evidence of use (TM)• Digital token / tokenisation of IP Right• Digital Trademark Registration Certificate
2	Enforcement	<ul style="list-style-type: none">• Authenticity / Brand security• Infringement• anticounterfeiting
3	Identity	<ul style="list-style-type: none">• Legal entity• Identity management• Identity reuse• Global Identifiers
4	Data Sharing	<ul style="list-style-type: none">• Priority documents sharing (1,4)• Legal status data• Unpublished prior art• Other secure data exchange e.g. SFTP• Publication of information on Software (computer programs) and databases• International storage/database of 3D models

Use Cases

No.	Theme	Use Case(s)
5	Commercialisation	<ul style="list-style-type: none">• IP Rights licensing• Copyright CMO• IP right transfer
6	Traceability	<ul style="list-style-type: none">• Trade secrets / smart NDAs (sharing)
7	Ownership	<ul style="list-style-type: none">• Evidence of ownership• Evidence of inventorship / creatorship• Trade Secrets (proof of possession)

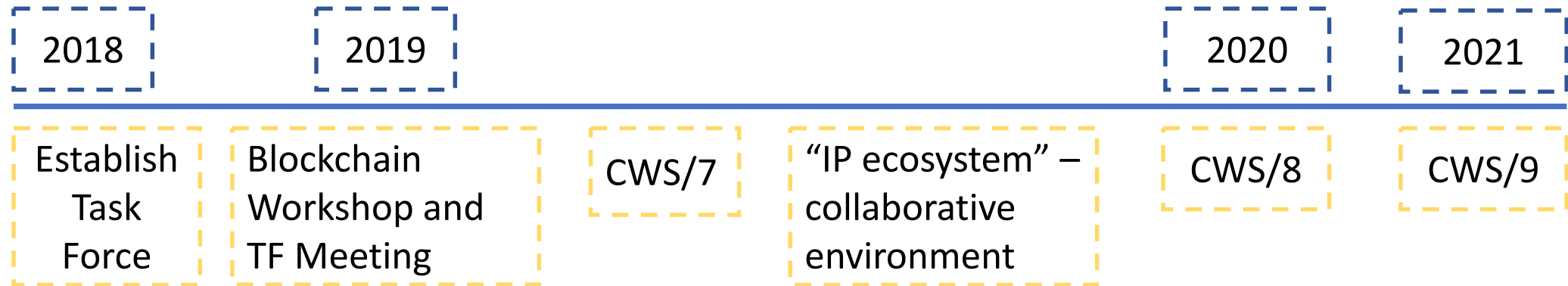
2019/2020 Workplan

Round	Action	Planned Completion Date	completed	Deferred
1	Collect information from Task Force members on developments in use of and experience with blockchain including Task Force members business cases for future presentation and discussion	February 2019	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Prepare draft structure and questions of questionnaire on IPO use of and experience with blockchain	March 2019	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Provide working document to CWS	TBC	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Hold round 1 webex with Task Force members	March 2019	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Blockchain Workshop	Present on IPA Blockchain Proof of Concept	April 2019	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Present on candidates for standardization		<input type="checkbox"/>	<input type="checkbox"/>
	Face to Face Task Force meeting		<input type="checkbox"/>	<input type="checkbox"/>
2	Modifications to draft Task Force objectives publication on wiki	May - June 2019	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Modifications to draft Standard scope publication on wiki	May - June 2019	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Draft Standard objectives publication on wiki	May - June 2019	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Draft Standard title publication on wiki	May - June 2019	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Draft standard Table of Contents publication on wiki	May - June 2019	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Use Cases (raw state) publication on wiki	May - June 2019	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Hold round 2 webex with Task Force members	June 2019	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CWS/7	Prepare and Present Task Force report to CWS	July 2019	<input type="checkbox"/>	<input type="checkbox"/>
	Provide oral presentation on Task Force work including TF members survey results	July 2019	<input type="checkbox"/>	<input type="checkbox"/>
	Hold CWS Task Force Face to Face meeting	July 2019	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Provide 2019/2020 workplan	July 2019	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	WIPO to contact and coordinate with ISO for inclusion of Blockchain Task Force representation as liaison to ISO and specifically ISO TC/307	August 2019 -	<input type="checkbox"/>	<input type="checkbox"/>
	Refinement and prioritisation of Use Cases	August 2019 -	<input type="checkbox"/>	<input type="checkbox"/>
	Investigate and establish a collaborative environment for support of Use Cases and Standard development	August 2019 -	<input type="checkbox"/>	<input type="checkbox"/>
	Refine draft standard Table of Contents	August 2019 -	<input type="checkbox"/>	<input type="checkbox"/>



Round	Action	Planned completion date
3 (Post CWS/7)	WIPO to contact and coordinate with ISO for inclusion of Blockchain Task Force representation as liaison to ISO and specifically ISO TC/307	August 2019 - XXXX
	Refinement and prioritisation of Use Cases	August 2019 - XXXX
	Investigate and establish a collaborative environment for support of Use Cases and Standard development	August 2019 - XXXX
	Refine draft standard Table of Contents	August 2019 - XXXX

2021 Roadmap





Australian Government

IP Australia



Blockchain Task Force

Thank you

Blockchain IPOs Survey

1) What areas do you consider blockchain to be a high value opportunity or potential threat in the field of IP

a. Areas of importance focused on technology. (i.e. Distributing networks, Immutability of records, shared trust etc.)

.....

b. Area of importance focused on IP Rights (i.e. Enforcement, management, Identity, Commercialisation etc.)

.....

2) Blockchain related activities within your organization

a. Existing or future projects, using blockchain technologies

.....

b. Partnership with private sector, industry members, IP professionals, Research authorities (i.e. universities) working in the Blockchain field

.....

c. Please detail any office participation or planned participation in blockchain events such as (hackathons, conferences, government and industry research project/papers etc.)

.....

3) Does your office agree with the following scope statement for the Standard on Blockchain?

This Standard aims to guide the Intellectual Property Offices (IPOs) and other Organizations that need to manage, store, process, exchange and disseminate IP data using Blockchain. It is intended that by using this Standard, the development of Blockchain can be simplified and accelerated in a harmonized manner and interoperability among IP Offices.

Yes

No

If No, please indicate change / modifications required

.....

4) Does your office agree with the following Objective for the Standard on Blockchain?

a. For Intellectual Property Offices and other organisations to manage, store, process, exchange and disseminate IP data using Blockchain in a standardised reusable manner.

b. To ensure that Industry best practice is followed and leveraged wherever applicable

c. To establish a common technology framework to support IPO blockchain advancement and concurrent interoperability.

d. A common practice and use of terminology to support collaboration and blockchain initiatives

5) Does your office have any comments on appendix 1.0 Draft Structure of Blockchain Standard, specifically its table of contents?

Yes

No

If, No, please indicate changes / modifications required.

.....

6) The Task Force has selected two Internal and two external facing blockchain proof of concept exercises for consideration by IPOs. These have been established by considering blockchains ability to resolve problems faced by IPOs and our customers.

Please rank your preference as to which proof of concept should be targeted as a priority (H=high, M=Medium, L=low).

Internal	Rank	External	Rank
Immutable data sharing between offices e.g. Priority data		IP Rights Licensing	
Smart contracts e.g. automated renewals processes and record of ownership changes		Blockchain for priority filing	

7) Any other comments

.....

8) Contact information

.....
