

**Baker
McKenzie.**

Blockchain and IP law

WIPO Blockchain Workshop | Dr Birgit Clark

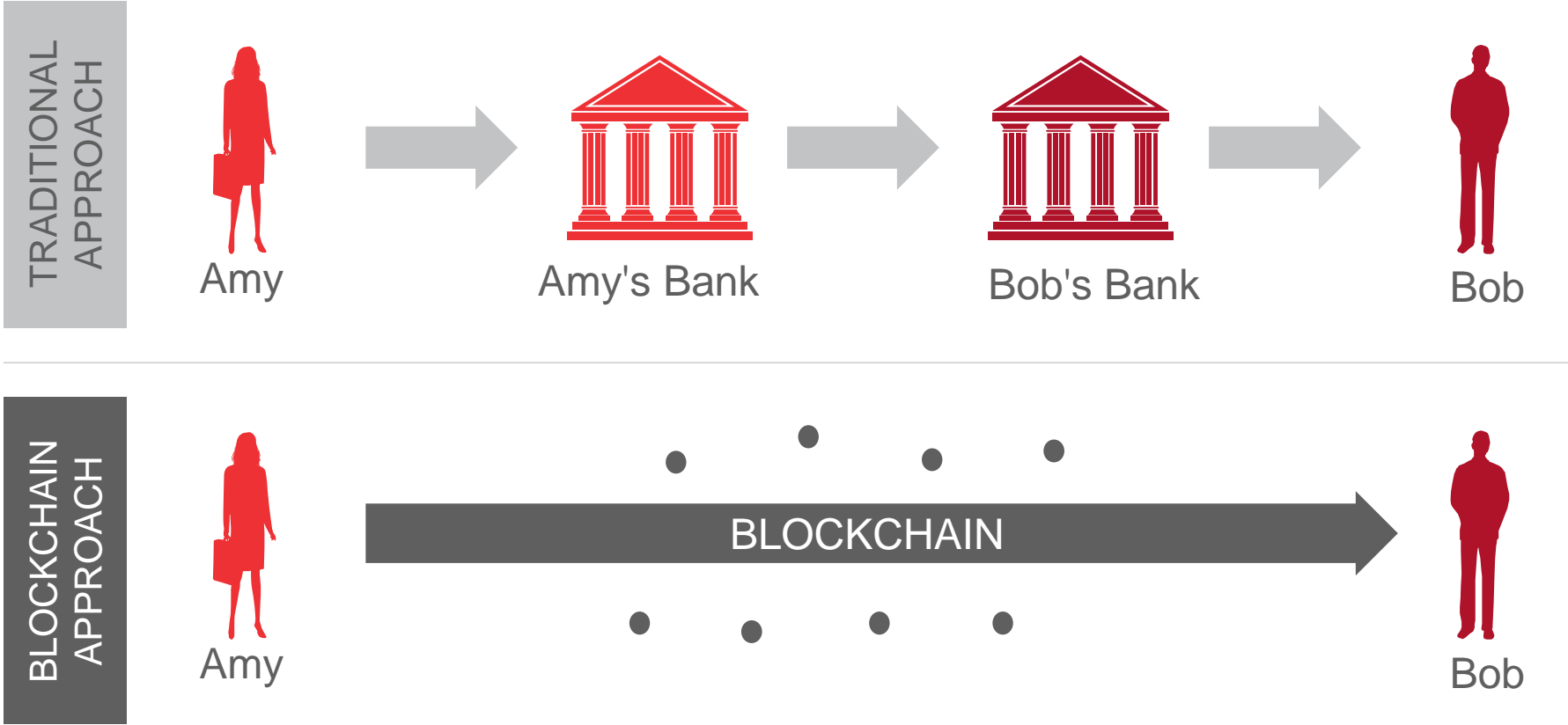




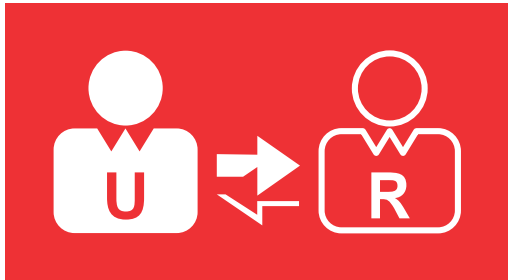
Confused by jargon?

Replacing the intermediary

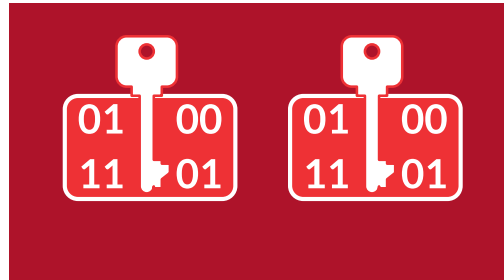
Situation: Amy needs to send money to Bob



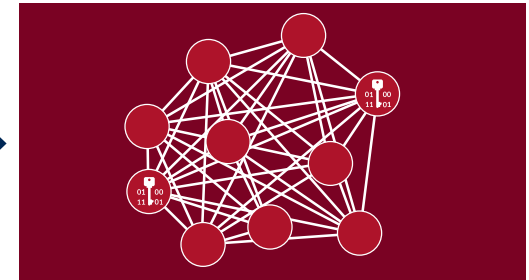
How a blockchain transaction works



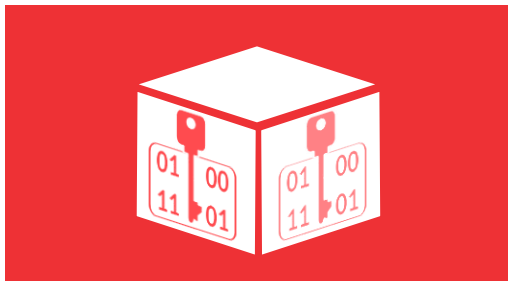
user and **recipient** wish to conduct a transaction (i.e. send data, cryptocurrency, contract, etc.)



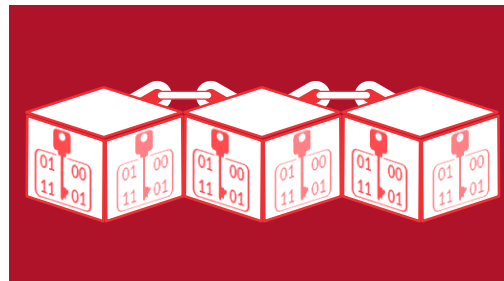
cryptographic keys assigned to User and Recipient



transaction is **"broadcast"** to and **"verified"** by a **decentralised P2P network** ("nodes"); using algorithms



- "miners" in the network "validate" the transaction
- creation of a **new date stamped block ("proof of work")**
- network balances updated



- new block added to the blockchain
- **(arguably) immutable and transparent record of transaction**
- cryptographic signature assigned

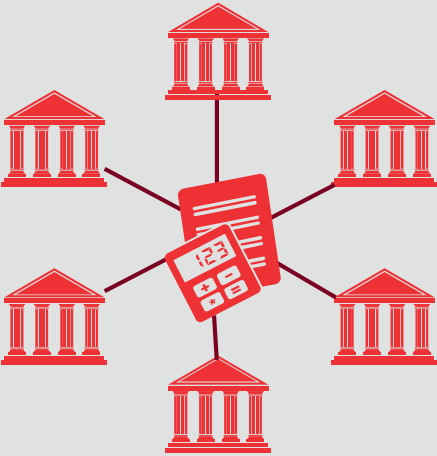


Transaction complete

Models

Model 1

Previous systems



A centralised system

Model 2

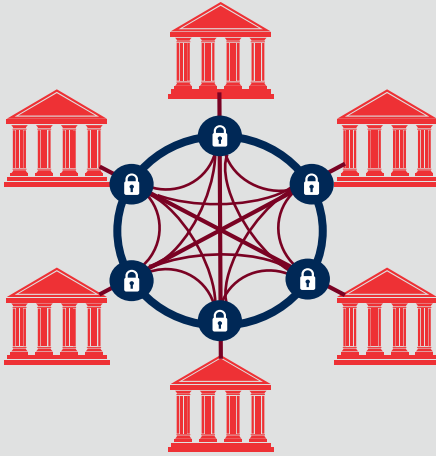
Public blockchain (permissionless)



An open network that anybody can access. The digital ledger of transactions is shared, transparent and run by all participants

Model 3

Private blockchain (permissioned)



The preferred option of most regulated entities. It is a private system which controls access to certain invited participants.

Use cases



Applications across industries



Financial Services



Pharma



Creative services



Public sector



Retail



EMI



Real Estate



Nature

- Payments
- Reconciliation
- Securities
- Supply chain
- Record keeping
- Asset management
- Digital identity
- Compliance
- Smart contracts



WIPO | MAGAZINE

Blockchain and IP Law: A Match made in Crypto Heaven?

Applications in IP



Patents



Certification
Trade marks



Supply Chain
Tracking



Trade Secrets



Evidence of
Creatorship



Provenance
Authentication



Smart IP Rights
and Registries



IP
Enforcement



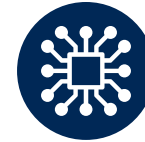
Smart
Contracts



Evidence
of Use



Anti-
counterfeiting



Digital Rights
Management



Traceability

"Smart" IP rights and registries



Centralized solution - run by the IP office as an accountable authority?



One global IP registry – a myth?



Replacing or supplementing the traditional IP register databases



Robust and trustworthy proof of events in the life of a registered IP right



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



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, copyright

 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

 "Pioneer" platforms

 Cf. authentication of "storytelling" products

China – ahead of the game



We should not reject or impose higher standards simply because it involves new technology... Provided that the technical verification is consistent and other evidence can be mutually verified, such electronic data can be used as evidence for the infringement in the (copyright) case

<https://mp.weixin.qq.com/s/W4HhYfwM8JUtBIWpQi2kqQ>



China's Supreme People's Court: evidence stored and verified on blockchain platforms may be used in legal disputes heard by the three internet courts in Hangzhou, Beijing, and Guangzhou (cf. notorisation by public notary)

Hangzhou Court Uses Blockchain-Based Evidence For First Time

TANG SHIHUA 

DATE : JUN 30 2018 / SOURCE : YICAI



Smart Contracts and DRM

Harvard
Business
Review

TECHNOLOGY

Blockchain Could Help Musicians Make Money Again

by Imogen Heap

JUNE 05, 2017



Smart contracts



No universal definition



Programmable transactions — computerised transaction protocols that recognise fulfilment of conditions and **automatically execute terms of a contract** (cf. "Oracles")




Digital Rights Management: (micro-)payments to IP owners in real time



Delay in payments issue

Anti-counterfeiting and enforcement

 Scannable tags or chips immutable information
(cf. QR codes and NFC tags)


 If genuine products are embedded with original tag, then its absence or incorrect/duplicate data will be an easy way for customs to check whether a product is counterfeit

 Educate and involve customs and customers

 Rethinking customs programs to prevent global trade in counterfeits


 Eliminating fakes


 **Provenance Authentication**

 Engaging customers in the process of verifying whether a product is genuine – won't change attitude of those that intentionally buy fakes?

Supply Chain and Traceability

 Fragmented supply chains, parallel imports, grey goods, selective distribution networks

 Legal traceability requirements (e.g. Falsified Medicines Directive (FMD), US Drug Supply Chain Security Act (DSCSA))

 Tracking the movements of a physical product, where it was placed on the market, shipped etc.

Example:

monitoring the authenticity of ingredients during all stages of production: raw material sourcing, manufacturing of the active pharmaceutical ingredients and the manufacturing of the final products

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 Secrets



Increasingly common for businesses (especially SMEs) to protect their inventions as trade secrets



Alternative to innovation patents

Definition:

information which is (i) secret, (ii) has commercial value and which (iii) has been **subject to reasonable steps to keep it secret** (cf. Article 39 TRIPS, US Defend Trade Secrets Act 2016, EU Trade Secrets Directive,) – **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: "smart NDAs"



Untested in courts

Who owns blockchain?



- Selecting and managing relationships with providers
- Contractual considerations

Will blockchain live up to the hype?

HURDLES TO LARGE SCALE APPLICATION

1 High cost per transaction

2 Time delay

3 High energy usage

4 Compatibility and standards

5 Public's confidence in technology and participants

6 Anti-trust / privacy concerns

But solutions are being developed

- Addressing bandwidth issues by reducing computing power required by each user computer / node
- Addressing storage issues by using hybrid models, in which not all data is stored on the blockchain (storing less significant data "off chain")

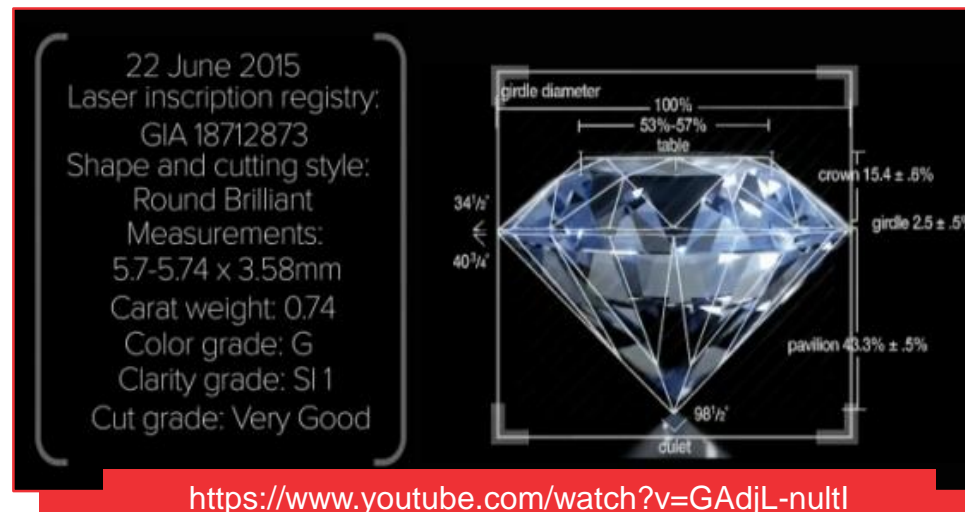
Relevant tracking applications: examples

01 Provenance: "Everledger"

- Verify origins and ownership of diamonds
- Number on diamond / features of diamond and ownership on a blockchain

02 Marketing / consumer engagement: "Babyghost"

- RFID tags in clothing interact with blockchain
- Allowed clothes to 'tell their own story' – those scanning tag could access details about the design
- Possible application in sustainability messaging, promotions, authenticity checks
- RFID / QR Code technology also developing fast



Relevant Tracking Applications

03 Anti-counterfeiting

- Interaction with RFID tags / other identifiers in physical world
- Potentially help identification by customs
- Benefit of a global solution

04 Parallel trade

- Identify where diversions out of legitimate supply chain occur
- Trace origin of products
- Consumer trust / reliance on warranties etc





Questions

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