IPRx: IP registration and exchange protocol

Case Study
IPRx Case Study

Grantly Mailes

- Associate Director, Boston Consulting Group
- APAC lead - BCG Centre for Digital Government
- APAC lead - emerging technologies (inc. Blockchain, AI and cybersecurity)
Case Study: IP Australia-Civic Ledger Blockchain Proof of Concept
Australian emerging FinTech of the year 2018

Blockchain-based registration and trading platforms

Strong focus on “public good” applications:
• IP rights management and markets
• Agricultural water rights
• Carbon trading, including global offsets
Civic Ledger and IP Australia Case Study

Innovation open tender study

- How blockchain could integrate into the existing IP Rights management system
- Explore a future IP Rights ecosystem that could promote the global trade and commercialisation of IP
- Future-proof the agency, provide a platform to innovate in Australian (global) IP

Two Phases

1. Digital representation and processing of IP rights
2. Global trade and commercialisation of IP
The standard patent process is robust...

1. Search
2. Application
3. Publication
4. Examination
5. Acceptance
... however it does not serve all of the needs of a modern economy

Every due diligence search starts from scratch

Discovery is difficult, no exchange platform

Lacks transparency, requires experienced services support

Patent purchase is long and expensive

Difficulty in collateralising IP in some cases e.g. securing loans

Limited to patents, not trademarks and copyright
IPRx - Proof of Concept: Civic Ledger & IP Australia
IPRx provides three key functions

**TOKENISES IP ASSETS**
Turns an IP entitlement into a digital asset:
• Reduce friction
• Speed process
• Enable automation

**CREATES A GLOBAL IP SYSTEM**
Creates a global internet of federated IP registration systems:
• Speeds the process
• Increase transparency and certainty for rights owners
• Reduce costs for stakeholders

**ENABLES MARKETPLACES**
Promotes an ecosystem of IP marketplaces:
• Commercialisation & investment opportunities
• Speeds innovation systems
IPRx solved 8 key challenges in the IP lifecycle

- Transparency
- Commercialisation
- Global opportunity
- Blockchain security
- Slash DD/trade cost
- Increase liquidity
- One click trading
- Spark innovation
Phase 1 - Proof of Concept

1. Register an application
2. Publication/Examination/Acceptance
3. Digitisation of IP rights
4. Licensing of patent asset
5. Transfer rights/ownership of IP asset
Phase 2 - design a trading scheme for IP assets
Phase 2 - Extension of PoC to a marketplace
Phase 2 - User dashboard

Hi Tim Roberson,

This is your patent dashboard. From here you can see all the patents you own, any licenses you have, and view the status of any current bids or offers for licenses.

My Licences

Hybrid solar and chemical looping combustion system for use in power generation system, has fuel reactor which is to be heated directly or indirectly by concentrated solar energy

Applicant: Tim Roberson
Inventor(s): Green, Martin Andrew
Agent Name: Peterson Patents
Patent No: 2006238888
WIPO No: PCT/02011/000954
First IPC mark:
Phase 2 - product search and discovery
Phase 2 - product search and discovery

Latest Patents Listed

1. **Hybrid solar and chemical looping combustion system for use in power generation system**, has fuel reactor which is to be heated directly or indirectly by concentrated solar energy
   - Patent No. 2006238988
   - 3 year licence, limited usage
   - Application status: FILED
   - 10,000.00 per licence
   - Filing Year: 2013
   - Earliest priority date: 02-10-2013

2. **Granulator has impact surface that is kept at preset distance from rotary atomizer and at preset angle, such that portion of droplets are not fully solidified before contacting with impact surface**
   - Patent No. 2009262368
   - 4 year licence, limited usage
   - Application status: FILED
   - 13,000.00 per licence
   - Filing Year: 2009
   - Earliest priority date: 27-06-2008

3. **Stimulating and maintaining microbial consortia activity within subterranean solid carbonaceous medium to form methane comprises e.g. dosing first nutrient composition into microbial consortia environment and monitoring microbial consortia**
   - Patent No. 2014366896
   - 7 year licence, limited usage
   - Application status: FILED
   - 30,000.00 per licence
   - Filing Year: 2014
   - Earliest priority date: 25-06-2015
Congratulations, you have received a licensing request for one of your patents.

The license request is for Granulator has impact surface that is kept at preset distance from rotary atomizer and at preset angle, such that portion of droplets are not fully solidified before contacting with impact surface. This request has been made by Tim Roberson. You have the opportunity to Approve or Reject this license agreement. You will be paid $13,000.00 for this license. It will start from the date you approve the transaction, and will expire after 4 years.

Visit approval page

From the team at PatentedMarketplace.com

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Phase 2 - Enforcement

Finalise Purchase of Licence

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Hybrid solar and chemical looping combustion system for use in power generation system, has fuel reactor which is to be heated directly or indirectly by concentrated solar energy

PCT number: PCT/AU2014/000154
First IPC mark: E23/9/00
Licence term. 3 Licence applies to: Location, Sydney, NSW 2000, Australia

I agree to the terms and conditions associated with this Licence
I accept the terms and conditions associated with this marketplace

Subtotal. 10,000.00
GST. 1,000.00
Total Due. 11,000.00

Secured by the blockchain
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.

Payment Method

Complete Purchase
Trade and licensing of IP rights
IPRx Process Flow

IPRx (Intellectual Property Registration & Exchange Protocol)

IP Jurisdiction
- Jurisdiction A
- Jurisdiction B
- Jurisdiction C

IPR Registration

IPR Issuance
- IPR
- IPR
- IPR

IPR Peer to Peer Exchange

Transparency
- Ownership/license verification
- IP portfolio management
- Real-time IP dashboards
- Enforcement tools

Investment / commercialisation
- Fintech / investment innovation
- IPR as collateral for commercial loans
- IPR kickstarter
- IPR profit share schemes

Exchange
- Public marketplaces
- Vertical marketplaces
- Curated marketplaces
- Bundle marketplaces
IPRx simplified technology stack

**User Services**
- User interface/User experience
- Token and Fiat exchange rails
  - Search
  - Portfolio Management
  - Market Making
  - Marketplaces

**Protocol**
- IPRx – IP Registration and eXchange protocol
  - Software Development Kit
  - Smart Contracts

**Infrastructure**
- Ethereum PoA
- IPFS
Outcomes of the PoCs

- Changes the business model for IP
- Expose the lifecycle of patents to any party
- Create an IP marketplace
- Provenance of IP - chain of title
- Automation by smart contracts

- Private versus public registrations - everything is public, is that OK?
- GDPR considerations - cannot forget anyone on the blockchain
- Can be global, but needs global treaties or agreement

- Disintermediate IP lawyers a bit
- But could change their business model

- Log every successful IP claim on the blockchain to reduce future due diligence effort on patents
- Creates a market for the due diligence efforts
- Platform open to FinTech investment and innovation
Next steps:
A sandbox for IPRx
Prospective Phase 3 - Sandbox to scale, up-scale out

IP jurisdiction and industry engagement
- Key challenges to solve
- Co-design

Switch from R&D to BAU
- Solve a wider problem set
- Away from “happy path”

Solve industry challenges
- Outcome focus

Pressure test in a sandbox environment
- Develop IPRx in real world circumstances