

Blockchain and Smart Contracts in China

-- A Survey of the IP industry

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IDEAS

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Outline

- Background: blockchain & smart contracts in China
- A survey: who are using blockchain technology & smart contracts?
- Benefits and limits
- Legal problems
- Looking forward

Blockchain technology

- Widely used in China
- The government is scrupulous on cryptocurrency
 - 2017, People's Bank of China ordered a ban on domestic initial coin offering (Notice on Preventing Financial Risk of Issued Tokens)
 - 2013, Notice on Preventing Financial Risk of Bitcoin

- The government has also been embracing blockchain technology
- Supports the creation of a blockchain ecosystem.
- The 13th Five-Year Plan (2016-2020) calls for development of promising technologies including blockchain and AI
- Even People's Bank of China is testing a prototype blockchain based digital currency

Smart contracts

- Contracts on the blockchain
- A piece of software that stores rules for negotiating the terms of an agreement, automatically verifies fulfillment, and then executes the agreed terms.

A survey: which sectors are using blockchain technologies?

- Technology companies as service providers
- Public sectors
- Private sectors

- Tech companies:
 - OnChain: Cryptocurrencies; PaaS
- Government:
 - Ministry of Industry and Information Technology aims to promote greater standardization across blockchain

- Public-private partnership: Identity Chain on blockchain based on DNA (distributed networks application)
 - through cross-chain technology to achieve different applications corresponding to the chain between the chain of value transfer and business collaboration
 - the project is initiated by Guizhou Far East Integrity Management Company

- > The judiciary judiciary has endorsed the validity of data stored on blockchain as evidence in legal disputes.
- > In July 2018, the Hangzhou Court of the Internet has confirmed the validity of electronic data stored via the blockchain as evidence in an online copyright trial.

■ Legal Services:

— The national judicial expertise center, as the node, provides the judicial expertise evidence issuance service.

— A blockchain for the digital storage of enterprise emails as evidence. No one can tamper or delete once it's in the blockchain. E.g. Alibaba: email repository system

■ Logistics

— VeChain: a blockchain platform offering Blockchain-as-a-Service to enterprises for products and information

- counterfeit goods

- first sale and parallel import

— Moutai 2017

■ Intelligent Contract (智合同)

(<http://www.xuansba.com>)

— Scans and analyzes contracts in a few seconds to discover risks and uncertainties

— low costs (each scan costs 1 Yuan & 3 seconds for a contract under 20 pages) (cf, with law firm where the normal working load is 3 days + 1000 dollars)

■ Fund raising for charity:

Ant Financial:

- 2016, first project using blockchain to raise funds for children with hearing disabilities
- 2017, collaborate with China Social Assistance Foundation
- Each amount of donation has a tracking record

■ Intellectual Property

- Copyright registration: 40 cents per registration (Proof of Existence 2.0)
- Tracking record of the use of trademark (Numchain)
- Transaction: Micro Film (Micro Video) Copyright Centre <https://www.wsp360.org>

Smart contracts: benefits

- Direct dealings with customers
- More trust
- Fraud reduction
- Cost efficiency
- Record keeping

Smart contracts: main challenges

- Understandability
- Rigidity by code
- Rigidity by decentralization

Legal Issues

- Formation
- Performance and modification
- Enforcement, remedies and dispute resolution

Formation

- Offer: a smart contract code is posted to a ledger
- Acceptance: is an offeree clear about the contents of the offer? (s30 Contract Law of 1999)
- Impossible to withdraw offer or acceptance due the speedy transmission of data and the irrevocable encoded data on the blockchain
- Undermine the party autonomy

Performance and modification

■ Performance:

Only full performance can be recognized; delay or incomplete performance (substantial performance) is not recognized (s94 Contract Law)

■ Modification:

Change of circumstances is recognized by Contract Law (ss68-69) but not accommodated by smart contract

Enforcement, remedies and dispute resolution

- The EU has created a union-wide ODR platform with translation services through the ODR Regulation (524/2013) and ADR Directive (2013/11/EU)
- The United Nations Commission on International Trade Law (UNCITRAL) has attempted to draft uniform procedural rules for ODR but the work has come to a relative standstill

What's next?

- Technological approach: from “code is law” to “law is code”
 - “the answer to the machine is in the machine”.
API, Oracle ...
- Regulatory approach
 - legislation
 - The court is the last resort

Looking forward

- Precautionary monitoring rather than pre-emptive regulation
- Study-and-watch approach