

Smart Contracts: Interfacing Javascript With English Contract Law

Why?

- Funding SME's in Hong Kong
- Event driven loans
- Borrower understands the terms of the loans
- Automatic bundling and analysis of loans

- <https://github.com/joequant/bitquant>
- This talk focuses on the coding parts
- Also able to talk about legal and finance parts

Who?

- Bitquant Research Laboratories (Asia) Limited
 - Coding and finance
- Crypto-Law (<http://www.crypto-law.com/>)
 - Legal and platform

What people get wrong with smart contracts

- Smart contract
 - Automation
 - Junction
 - Independence
- Smart contract wedded to a platform
- Contract not really a legal contract
- Not used for real deals
 - Two loans issued

The contract – TermSheet.js

- Boilerplate is English common law
 - Operating system
 - Exception handling
 - Used all over the world
- Schedules are in javascript
 - Web designers
 - Legal reasons
 - Integration into web frontends
- Contract execution
 - Md5sum hash on paper

Why Javascript?

- User demand
- Contract understanding
 - Coders understand javascript
 - Non-coders can use HTML frameworks

Why English common law?

- Common law (England, Hong Kong) = Javascript
- Civil law (Germany, Mainland China) = Java
- Common law has various implementations like javascript, and can be used to prototype
- Civil law requires a 'virtual machine' – i.e. the civil code, which is hard to port
- Boilerplate is compatibility layer
 - Includes
 - What is a 'writing'?

Other parts

- `contract_analyzer.html` – This file **analyzes** the contract but is not part of the contract. The user can bring in their own analysis problems
- `LoanCalculator.js` – Subroutines for the analyzer
- `Notes.js` – Explanation of the contract in plain English. Warranty document with ordinary borrower

Coding issues

- Module should be platform independent
- Minimize code in the contract
- No comments in the contract
- Certain phrases should not be used
 - default

Other unique parts

- All amounts calculated in HKD
- Principal paid in HKD
- Interest in XBT

IP issues

- Lawyers don't think about this issue and IP culture is odd for programmers
- It's different in different jurisdictions.
HK/Australia is different from UK/US
- Meta issues
- Assignment of copyright bootstrap
- Template is open source

What next?

- Start getting and issuing loans
- Improve the UI
- Infrastructure for smart loans see Crypto Law