

# Blockchain and Dispute Resolution: Current Projects

*ASA Conference, Bern, 14 September 2018*

*"Blockchain, Smart Contracts and Arbitration"*

Dr. Dominik Vock, LL.M.

Dr. Jonatan Baier, MIBL, ArbP



# Smart Contracts in a perfect world

- No more dispute resolution required as the smart contracts execute and enforce themselves  
arbitrators become jobless  
➔
- But is it a black and white world?

# Smart Contracts in the real world

- Smart contracts entail errors:
  - Erroneous code (bugs, content)
  - Vulnerability in code (hacks)
  - Incorrect data inputs
  - Not every scenario can be programmed in advance, e.g.:  
bad performance

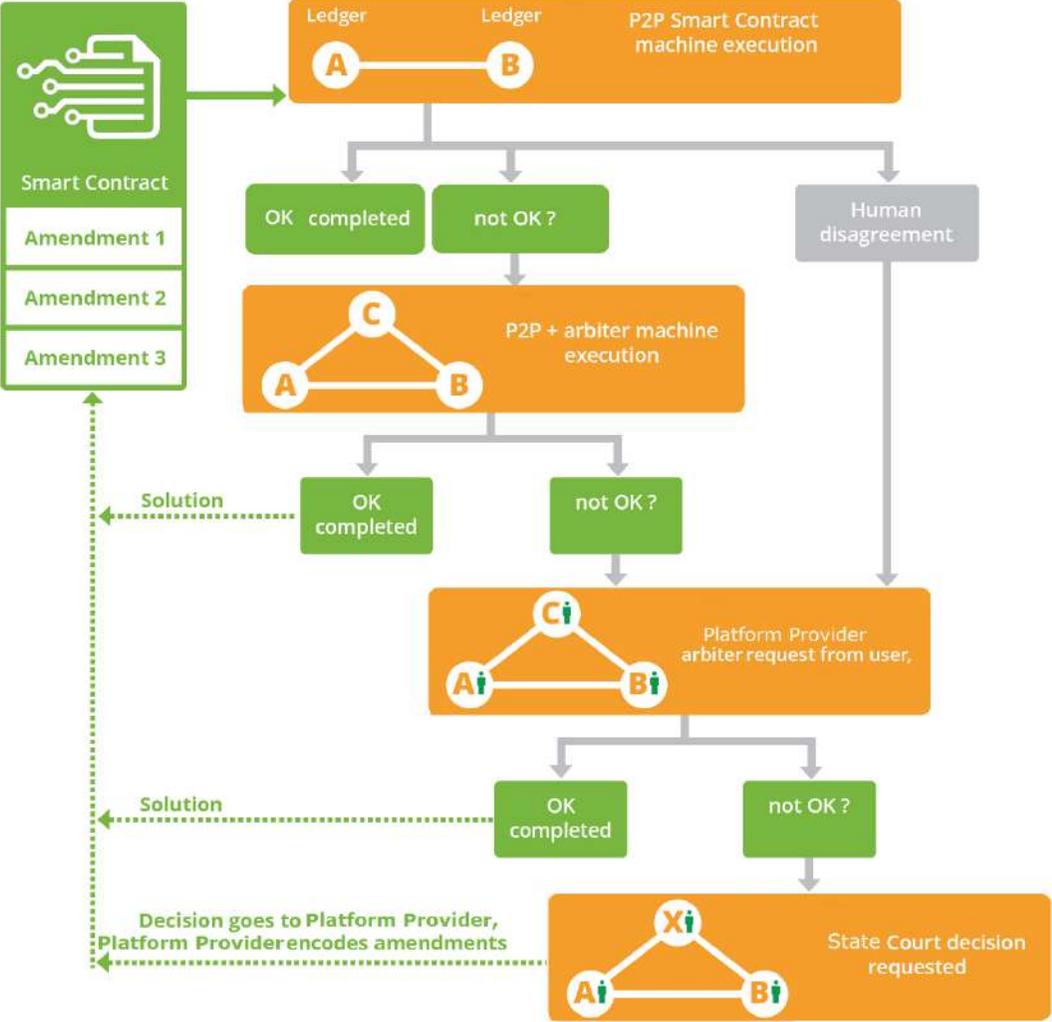
# Today's practice

- No dispute resolution mechanism selected
  - State court jurisdiction – but where?
  - Arbitration more suitable

# New approach

- Blockchain Arbitration:
  - Several projects
  - But just the beginning

# How smart contract arbitration could work



- **The Idea**

Platform to manage and facilitate international arbitration proceedings in a secure, timely and cost-efficient manner based on blockchain technology

- Smart Arbitration Contract
- International Dispute Resolution Platform

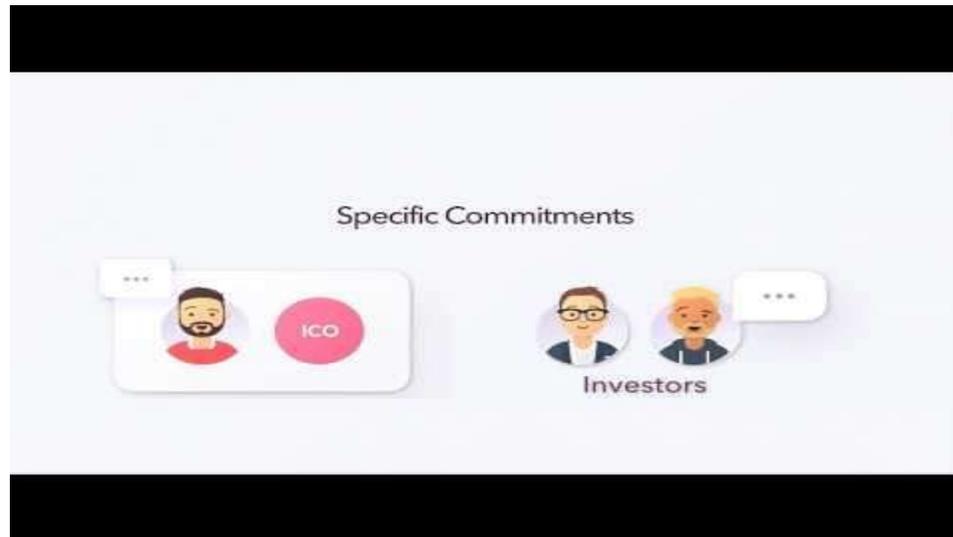
## ■ How It Works

- Registration of SAMBA account
- Input of arbitration agreement and other required information into a request form (request for arbitration)
- Request is sent to participating arbitration institution – if institution accepts, arbitration proceedings begin
- SAMBA provides case management platform, records the history of the dispute proceedings and encodes the rules of procedure



- **The Idea**

Platform for ICO execution based on smart contract technology that includes a dispute resolution function



<https://www.youtube.com/watch?v=sjC96Ztr62w>



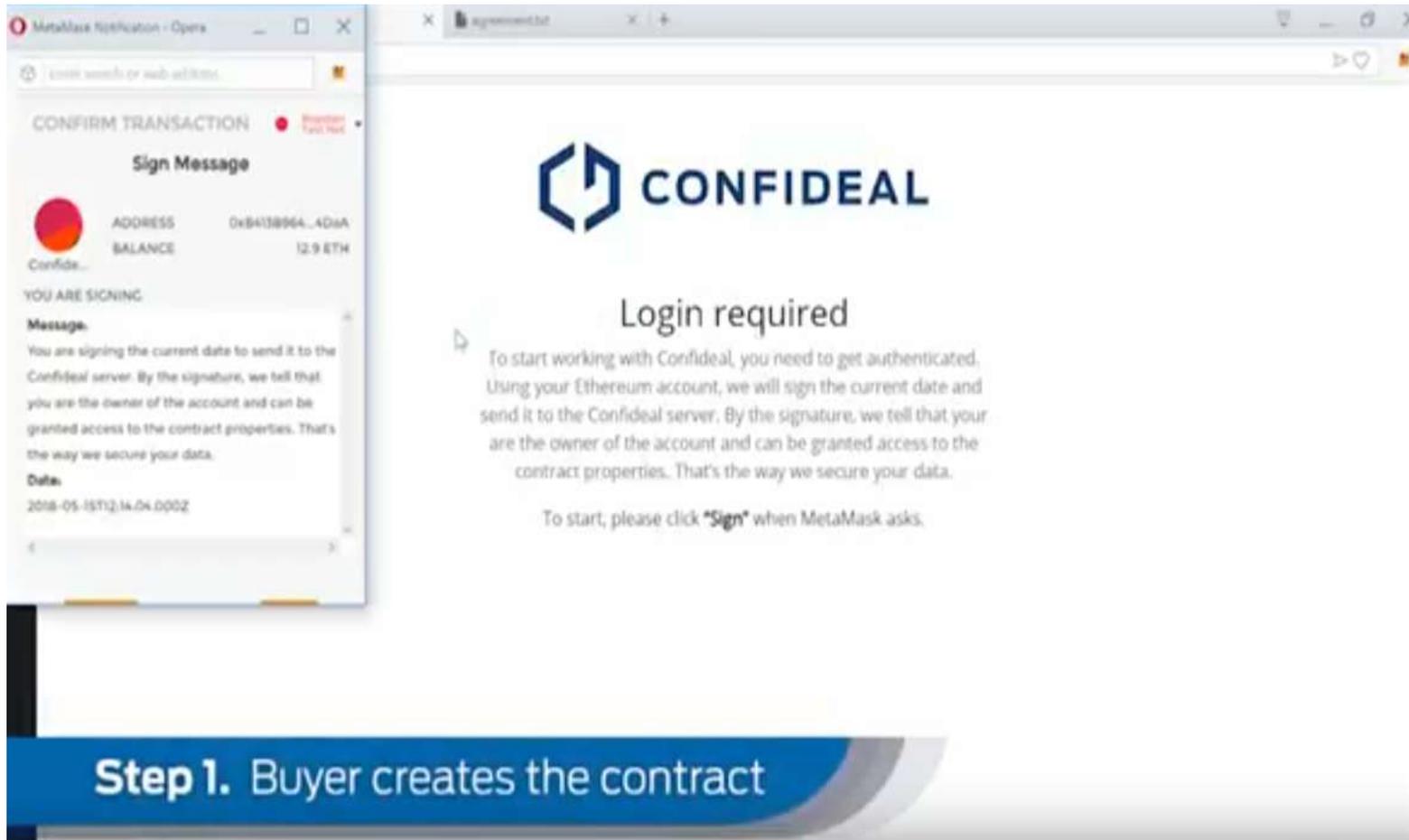
## ▪ How It Works

- ICO focus – systemization of relationships between project and investors based on smart contract
- Definition of milestones – with help of experts/arbitrators
- If milestone is reached -> release of pre-deposited funds for the respective milestone
- If investor disagrees -> experts/arbitrators resolve or decide the dispute (black or white decision)

- **The Idea**

Confideal is a service that helps parties create smart contracts on the Ethereum blockchain which includes a dispute resolution mechanism

## ■ How It Works



**Step 1. Buyer creates the contract**

# Confideal



**CONFIDEAL** on the testnet

Price: 5 ETH  
Confideal fee to be paid by the client: 0.05 ETH (1% of the contract price)

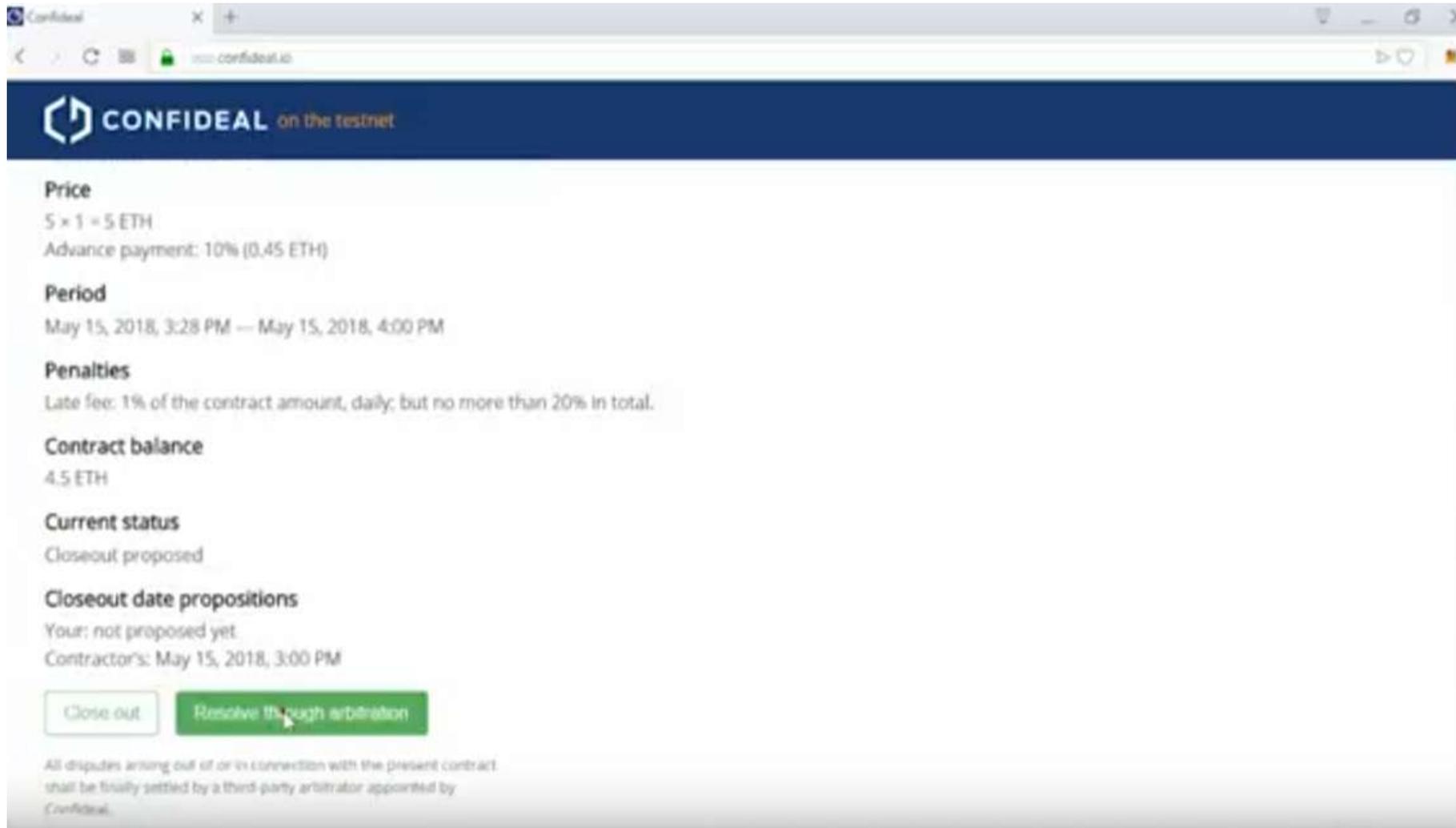
Advance payment: 10% | Due at closeout: 90%

Who pays the Confideal fee?  
 a client  a contractor

Penalties  
 Late fee  
1% of the contract amount, daily;  
but no more than 20% in total.  
(Contractor will be charged 0.05 ETH for each day overdue,  
but no more than 1 ETH.)

Arbitration clause  
 All disputes arising out of or in connection with the present contract shall be finally settled by a third-party arbitrator appointed by Confideal.

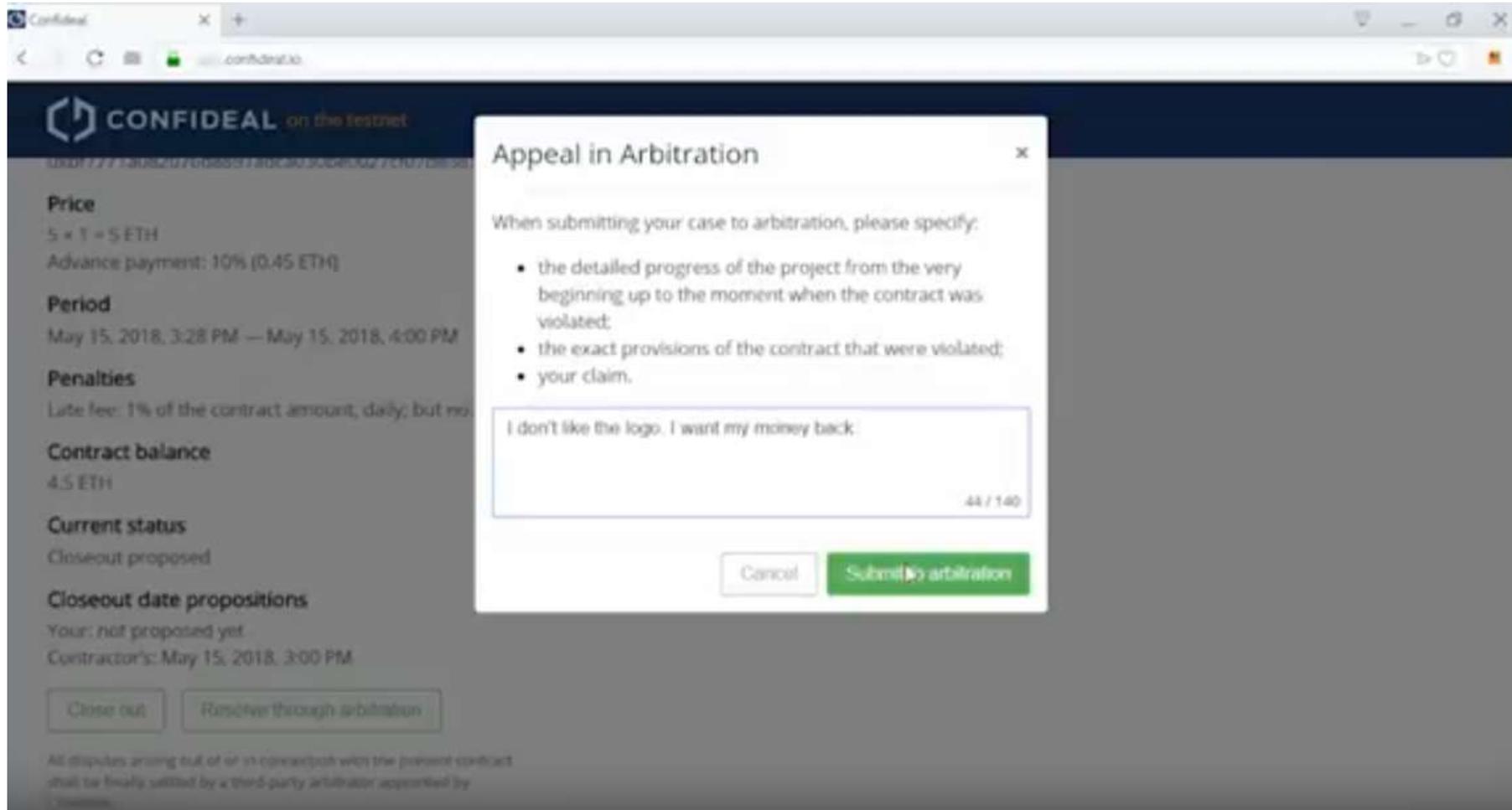
Create contract



The screenshot shows a web browser window with the URL `www.confideal.io`. The page header features the Confideal logo and the text "CONFIDEAL on the testnet". The main content area displays the following contract details:

- Price**  
5 × 1 = 5 ETH  
Advance payment: 10% (0,45 ETH)
- Period**  
May 15, 2018, 3:28 PM — May 15, 2018, 4:00 PM
- Penalties**  
Late fee: 1% of the contract amount, daily; but no more than 20% in total.
- Contract balance**  
4,5 ETH
- Current status**  
Closeout proposed
- Closeout date propositions**  
Your: not proposed yet  
Contractor's: May 15, 2018, 3:00 PM

At the bottom of the details section, there are two buttons: "Close out" and "Resolve through arbitration". Below these buttons, a disclaimer states: "All disputes arising out of or in connection with the present contract shall be finally settled by a third party arbitrator appointed by Confideal."



The screenshot shows a web browser window with the Confideal logo and the text "on the testnet". The main content area displays contract details:

- Price:** 5 x T = 5 ETH  
Advance payment: 10% (0.45 ETH)
- Period:** May 15, 2018, 3:28 PM — May 15, 2018, 4:00 PM
- Penalties:** Late fee: 1% of the contract amount, daily; but not more than 10% of the contract amount.
- Contract balance:** 4.5 ETH
- Current status:** Closeout proposed
- Closeout date propositions:**  
Your: not proposed yet  
Contractor's: May 15, 2018, 3:00 PM

At the bottom, there are two buttons: "Close out" and "Resolve through arbitration". A small disclaimer at the bottom reads: "All disputes arising out of or in connection with the present contract shall be finally settled by a third-party arbitrator appointed by the parties."

An "Appeal in Arbitration" modal dialog is open, containing the following text:

When submitting your case to arbitration, please specify:

- the detailed progress of the project from the very beginning up to the moment when the contract was violated;
- the exact provisions of the contract that were violated;
- your claim.

A text input field contains the text: "I don't like the logo. I want my money back." The character count "44 / 140" is visible at the bottom right of the input field.

At the bottom of the modal are two buttons: "Cancel" and "Submit to arbitration".



A third-party arbitrator is appointed automatically by Confideal. The arbitrator contacts both the customer and the contractor, reviews the case and carries out a resolution.



- **The Idea**

Decentralized arbitration protocol that uses game theory, blockchain and crowdsourcing for adjudicating claims in a fast, transparent and inexpensive way



[https://www.youtube.com/watch?v=NuSps\\_2wMQ4](https://www.youtube.com/watch?v=NuSps_2wMQ4)



## ■ How It Works

- New/ancient way for resolving disputes in a democratic manner
- Arbitrator must deposit tokens in order to be selected (the higher the amount of tokens, the higher the probability for selection)
- Arbitrators and their decisions are anonymous
- Arbitrator only earns tokens if voting is coherent with majority / loses tokens if voting is with minority
- Possibility of appeal

# Assessment of SAMBA



- Making arbitration less cost and time consuming
- Automation of dispute proceedings
- Security and confidentiality based on blockchain technology
- Compatibility with “arbitration as we know it”



- Is blockchain technology required, especially for case management platform?
- Technical limitations

# Assessment of JuryOnline, Confideal, Kleros



- Fast and cheap proceedings
- Efficient on-chain enforcement
- Rating of arbitrators?



- Various legal questions unanswered
  - Validity of the arbitration clause?
  - Exclusion of state courts?
- Nomination/anonymity of
  - Arbitrators
  - Parties
- Handling of off-chain issues?

# Outlook



## Office Zurich

Zollstrasse 62  
P.O. Box 1758  
CH-8031 Zurich  
T +41 44 254 99 66  
F +41 44 254 99 60

## Office Zug

Gubelstrasse 11  
P.O. Box 613  
CH-6301 Zug  
T +41 41 726 99 66  
F +41 41 726 99 60

[www.mme.ch](http://www.mme.ch)  
[office@mme.ch](mailto:office@mme.ch)



**Dr. Dominik Vock**  
Legal Partner

[dominik.vock@mme.ch](mailto:dominik.vock@mme.ch)  
[www.mme.ch](http://www.mme.ch)

Silvia Lopez  
Assistentin  
+41 44 254 99 87



**Dr. Jonatan Baier**  
Legal Partner

[jonatan.baier@mme.ch](mailto:jonatan.baier@mme.ch)  
[www.mme.ch](http://www.mme.ch)

Simone Ruefer  
Assistentin  
+41 44 254 99 69

## Office Zurich

Zollstrasse 62  
P.O. Box 1758  
CH-8031 Zurich  
T +41 44 254 99 66  
F +41 44 254 99 60

## Office Zug

Gubelstrasse 11  
P.O. Box 613  
CH-6301 Zug  
T +41 41 726 99 66  
F +41 41 726 99 60

[www.mme.ch](http://www.mme.ch)  
[office@mme.ch](mailto:office@mme.ch)