



# Smart Contracts

Rechtsanwalt Martin Steiger

*«Martin Steiger wird die  
einige rechtliche Aspekte  
beleuchten.»*

**Vertrag?**

**Vertragsfreiheit:** Freiheit, ob,  
mit wem, in welcher Form und  
mit welchem Inhalt ein Vertrag  
geschlossen wird

Code = Law?

*«Zum Abschlusse eines Vertrages ist die übereinstimmende gegenseitige Willensäusserung der Parteien erforderlich.»*

Art. 1 Abs. 1 Obligationenrecht (OR)

```

if tx.value < 100 * block.basefee:
    stop

state = contract.storage[I_STATE]
if state == S_START:
    contract.storage[I_PARTNER_1] = tx.sender
    contract.storage[I_PARTNER_2] = tx.data[0]
    contract.storage[I_STATE] = S_PROPOSED
    stop

partner_1 = contract.storage[I_PARTNER_1]
partner_2 = contract.storage[I_PARTNER_2]

if state == S_PROPOSED:
    if tx.sender == partner_2 and tx.data[0] == partner_1:
        contract.storage[I_STATE] = S_MARRIED
    else if tx.sender == partner_1 and tx.data[0] == partner_1:
        if block.timestamp < C_CANCEL_PERIOD:
            stop
        contract.storage[I_STATE] = S_START
        mktx(tx.sender, block.account_balance(contract.address), 0, 0)

else if state == S_MARRIED and tx.sender == partner_1 or tx.sender == partner_2:
    if tx.data[0] == TX_WITHDRAW:
        creator = contract.storage[I_WITHDRAW_CREATOR]
        if creator != 0 and contract.storage[I_WITHDRAW_TO] == tx.data[1] and contract.storage[I_WITHDRAW_AMOUNT] == tx.da
            mktx(tx.data[1], tx.data[2], 0, 0)
            contract.storage[I_WITHDRAW_TO] = 0
            contract.storage[I_WITHDRAW_AMOUNT] = 0
            contract.storage[I_WITHDRAW_CREATOR] = 0
        else:
            contract.storage[I_WITHDRAW_TO] = tx.data[1]
            contract.storage[I_WITHDRAW_AMOUNT] = tx.data[2]
            contract.storage[I_WITHDRAW_CREATOR] = tx.sender
    else if tx.data[0] == TX_DIVORCE:
        creator = contract.storage[I_DIVORCE_CREATOR]
        if creator != 0 and creator != tx.sender:
            balance = block.account_balance(contract.address)
            mktx(partner_1, balance / 2, 0, 0)
            mktx(partner_2, balance / 2, 0, 0)
            contract.storage[I_STATE] = S_DIVORCED
        else:
            contract.storage[I_DIVORCE_CREATOR] = tx.sender

```

Smart Contract  $\neq$  Vertrag,  
sondern IT-basierte  
Vertragserfüllung

**Form?**

*«Verträge bedürfen zu ihrer Gültigkeit nur dann einer besonderen Form, wenn das Gesetz eine solche vorschreibt.»*

Art. 11 Abs. 1 OR



*«Ist über Bedeutung und Wirkung einer gesetzlich vorgeschriebenen Form nicht etwas anderes bestimmt, so hängt von deren Beobachtung die Gültigkeit des Vertrages ab.»*

Art. 11 Abs. 2 OR

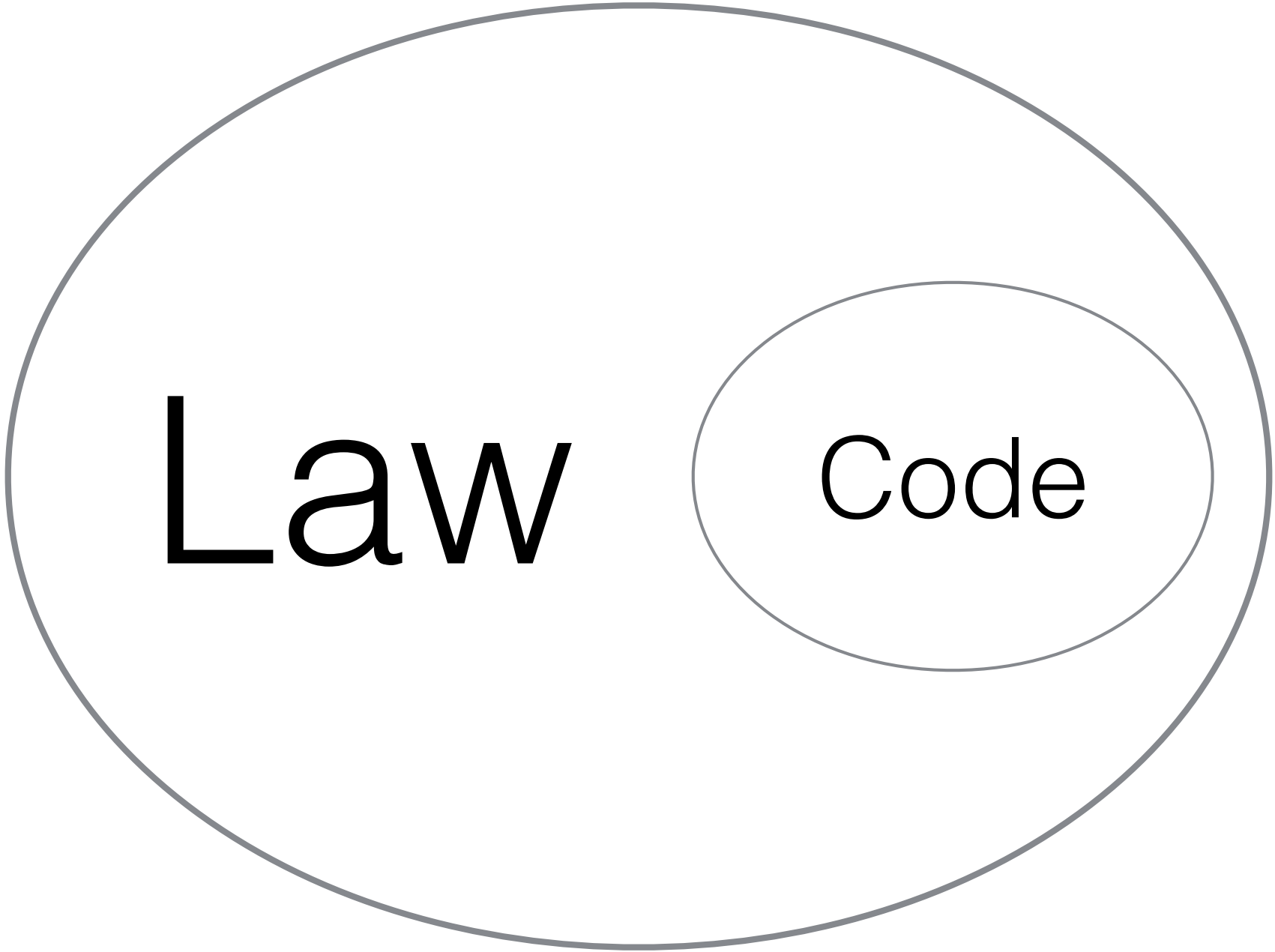
Smart Contract  $\neq$  gesetzliche  
Schutzfunktion durch  
Formvorschriften

**Grenzen?**

*«Niemand kann sich seiner Freiheit entäussern oder sich in ihrem Gebrauch in einem das Recht oder die Sittlichkeit verletzenden Grade beschränken.»*

Art. 27 Abs. 2 Zivilgesetzbuch (ZGB)





Law

Code

**Haftung?**

If the Ethereum Platform is rapidly adopted, the demand for transaction processing and distributed application computations could rise dramatically and at a pace that exceeds the rate with which ETH miners can bring online additional mining power. Under such a scenario, the entire Ethereum Platform could become destabilized, due to the increased cost of running distributed applications. In turn, this could dampen interest in the Ethereum Platform and ETH. Insufficiency of computational resources and an associated rise in the price of ETH could result in businesses being unable to acquire scarce computational resources to run their distributed applications. This would represent revenue losses to businesses or worst case, cause businesses to cease operations because such operations have become uneconomical due to distortions in the crypto-economy.

**Acknowledgment, Acceptance of all Risks and Disclaimer of Warranties and Liabilities THE USER EXPRESSLY KNOWS AND AGREES THAT THE USER IS USING THE Ethereum PLATFORM AT THE USER'S SOLE RISK. THE USER REPRESENTS THAT THE USER HAS AN ADEQUATE UNDERSTANDING OF THE RISKS, USAGE AND INTRICACIES OF CRYPTOGRAPHIC TOKENS AND BLOCKCHAIN-BASED OPEN SOURCE SOFTWARE, ETH PLATFORM AND ETH. THE USER ACKNOWLEDGES AND AGREES THAT, TO THE FULLEST EXTENT PERMITTED BY ANY APPLICABLE LAW, THE DISCLAIMERS OF LIABILITY CONTAINED HEREIN APPLY TO ANY AND ALL DAMAGES OR INJURY WHATSOEVER CAUSED BY OR RELATED TO RISKS OF, USE OF, OR INABILITY TO USE, ETH OR THE Ethereum PLATFORM UNDER ANY CAUSE OF ACTION WHATSOEVER OF ANY KIND IN ANY JURISDICTION, INCLUDING, WITHOUT LIMITATION, ACTIONS FOR BREACH OF WARRANTY, BREACH OF CONTRACT OR TORT (INCLUDING NEGLIGENCE) AND THAT NEITHER Stiftung Ethereum NOR ETHEREUM TEAM SHALL BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES, INCLUDING FOR LOSS OF PROFITS, GOODWILL OR DATA. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF CERTAIN WARRANTIES OR THE LIMITATION OR EXCLUSION OF LIABILITY FOR CERTAIN TYPES OF DAMAGES. THEREFORE, SOME OF THE ABOVE LIMITATIONS IN THIS SECTION MAY NOT APPLY TO A USER. IN PARTICULAR, NOTHING IN THESE TERMS SHALL AFFECT THE STATUTORY RIGHTS OF ANY USER OR EXCLUDE INJURY ARISING FROM ANY WILLFUL MISCONDUCT OR FRAUD OF Stiftung Ethereum.**

## **RISK OF TEMPORARY NETWORK INCOHERENCE**

We recommend any groups handling large or important transactions to maintain a voluntary 24 hour waiting period on any ether deposited to ease the integrity of the network in a crisis due to issues in the clients we will endeavor to

Kein Vertrauen  
ohne Haftung

**Kontrolle?**

*«Unlauter handelt insbesondere, wer allgemeine Geschäftsbedingungen verwendet, die in Treu und Glauben verletzender Weise zum Nachteil der Konsumentinnen und Konsumenten ein erhebliches und ungerechtfertigtes Missverhältnis zwischen den vertraglichen Rechten und den vertraglichen Pflichten vorsehen.»*

Art. 8 Lauterkeitgesetz (UWG)



EQUAL JUSTICE UNDER LAW

Notwendig: Rechtsrahmen  
für Smart Contracts

1. **Code ≠ Law I:** Trennung von Vertragsschluss und Vertragserfüllung durch Smart Contracts
2. **Code ≠ Law II:** Grenzen der Vertragsfreiheit
3. **Neuer Rechtsrahmen** für automatisierte Vertragserfüllung: Haftung? Kontrolle?
4. **Dezentralisierte Blockchain:** Anwendbares Recht und Gerichtsstand?

**Vertrauen**



## **Rechtsanwalt Martin Steiger**

**E-Mail** [martin.steiger@steigerlegal.ch](mailto:martin.steiger@steigerlegal.ch)

**Telefon** +41 44 533 13 60 | +41 79 606 96 92

**Facebook, Twitter, ...** [martinsteiger](#) | [steigerlegal](#)

**Website** <https://steigerlegal.ch>

**Kanzlei** Florastrasse 1, 8008 Zürich