

As mentioned several times in the scope of this writing, smart contracts are a crucial part of a decentralized infrastructure. Very similar to their “real-life” counterparts these contracts programmatically prescribe the conditions that need to be met for a transaction to take place. Obviously without the contemporary vocabulary, the framework for the smart contracts has been laid out by Szabo in his 1994 article:

„A smart contract is a computerized transaction protocol that executes the terms of a contract. The general objectives of smart contract design are to satisfy common contractual conditions (such as payment terms, liens, confidentiality, and even enforcement), minimize exceptions both malicious and accidental, and minimize the need for trusted intermediaries. Related economic goals include lowering fraud loss, arbitration and enforcement costs, and other transaction costs” (Szabo 1994).

The above mentioned ideas have come to fruition and have found a platform approximately 5 years after the conception of the first cryptocurrency. From the beginning on smart contracts have been native residents in the Ethereum network. This passage from the Ethereum white paper better illustrates their role in the network: “In Ethereum, there are actually two types of entities that can generate and receive transactions: actual people (or bots, as cryptographic protocols cannot distinguish between the two) and contracts. A contract is essentially an automated agent that lives on the Ethereum network, has an Ethereum address and balance, and can send and receive transactions” (Buterin 2013). Another prominent distributed technology, which is a hypermedia transfer protocol (just like HTTP) and network infrastructure is IPFS. IPFS is acronym for Inter Planetary File System. The name is a reference to J.C.R Licklider’s “Intergalactic Computer Network” when he envisioned a worldwide computer network before he paved the way to build ARPANET, the direct predecessor of the Internet. According to their webpage, IPFS is a „peer-to-peer, hypermedia protocol to make the web faster, safer, and more open” (IPFS 2018). It creates the possibility to distribute large volumes of data efficiently.