SoliDoX

Document verification using Blockchain

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Introduction

To create a Document verification system using Blockchain technology.

Objectives

- Prevent document manipulation frauds

- Developing a smart-contract for the Ethereum Virtual Machine

- Create an easy to use platform to interact with the verification smart contract

- Optionally store the document in an encrypted form in an off-chain storage solution like IPFS (Inter Planetary File System)

Solution

Identity

Each institution should publicly disclose an Ethereum Address associated with them.

Issuing

Institutions can issue a document and upload the hash of it to the blockchain, with or without our platform. A document ID will be associated with the document which can be shared to the acquirer along with the document. Optionally, a copy of the document can be stored on an off-chain storage with encryption.

Verification

Acquirer can submit the document ID and the document/decryption key to verify the document. The blockchain will point to the issuer's Ethereum Address which is public knowledge.

Working

Smart-Contract

Immutable code stored in the blockchain responsible for issuing documents.

SoliDoX Platform

A portal for authorities to issue documents. Also can verify documents with it.
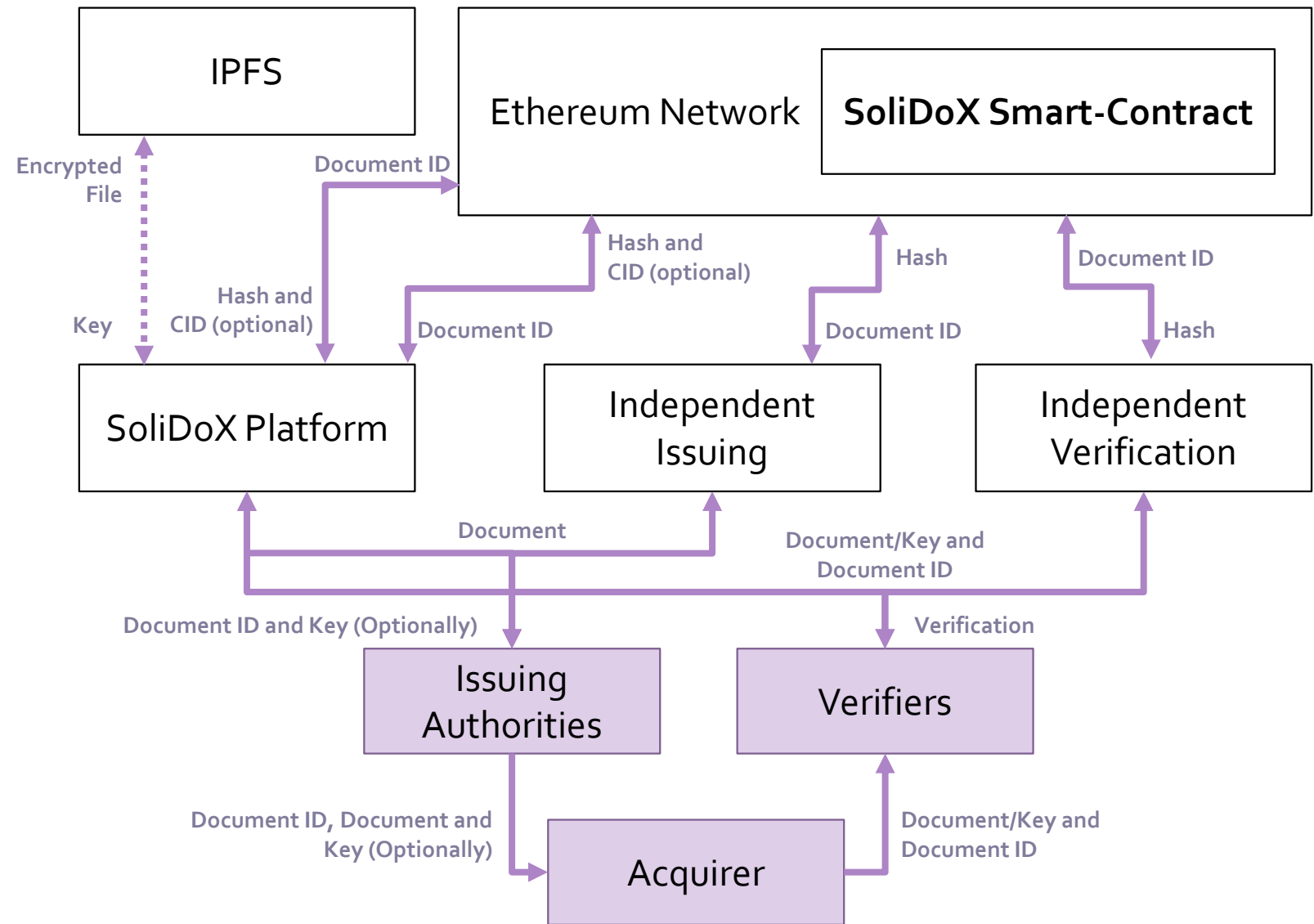
SoliDoX App

A simple app to verify documents using SoliDoX.

Alternatively, if the issuer and verifier has the technical know how, they can issue and very independently even without the platform.

But it is guaranteed that the original document cannot be tampered with.

Working

Working

Issuer's Address | 0x361533c45e0a39f1dCE71b917c695CAAa73a1043

Document ID

SHA**256**
IPFS CID (Optional)
Expiry (Optional)

7c311687f897d351983782f93c5e69391db1e469ae9ed14ba319d125a5efecb2
Qme7ss3ARVgxv6rXqVPiikMJ8u2NLgmgszg13pYrDKEoiu
1677996803634
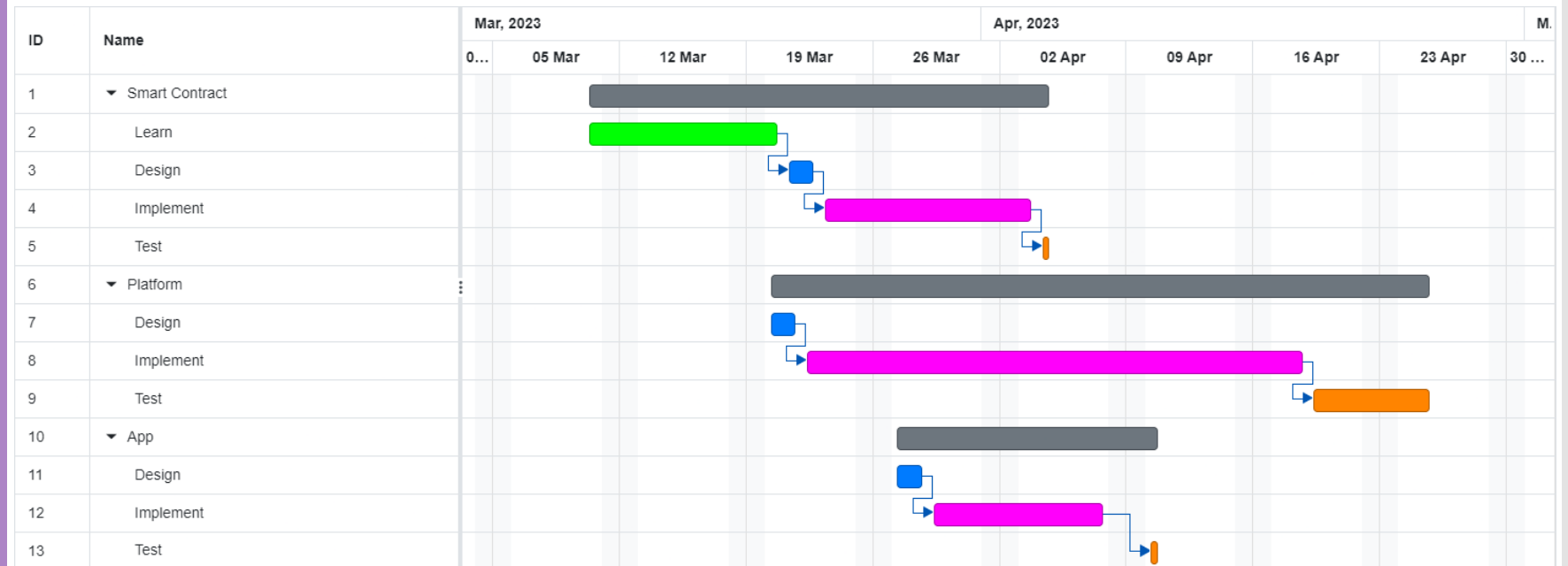
Technologies Used

Smart-Contract

Solidity

SoliDoX Platform

HTML, CSS, JavaScript,
Node.js, MongoDB

SoliDoX App

Flutter

Implementation Plan

Conclusion

A blockchain based application used to check the genuineness of the document uploaded in order to prevent the flow of fake documents in the real world. When an authority issues a document, the Ethereum blockchain gives it an ID. Any user can verify the digital signature of a document, certifying its authenticity by referring the data on the blockchain corresponding to the ID.

THANK YOU