Chronological Independently Verifiable Electronic Chain of Custody Ledger using Blockchain Technology

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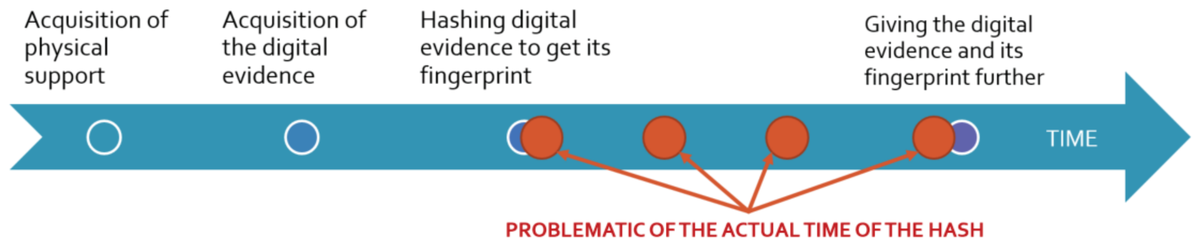
ARTICLE

Introduction

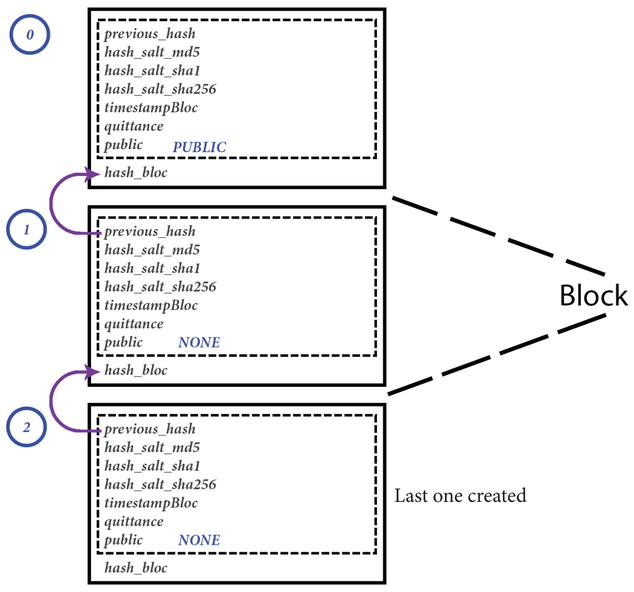
- Improving Chain of Custody in Digital Forensics
- Timestamping Digital Evidence Hash Values
- Solution based on blockchain technology
- E-CoC Ledger hosted by trusted entity



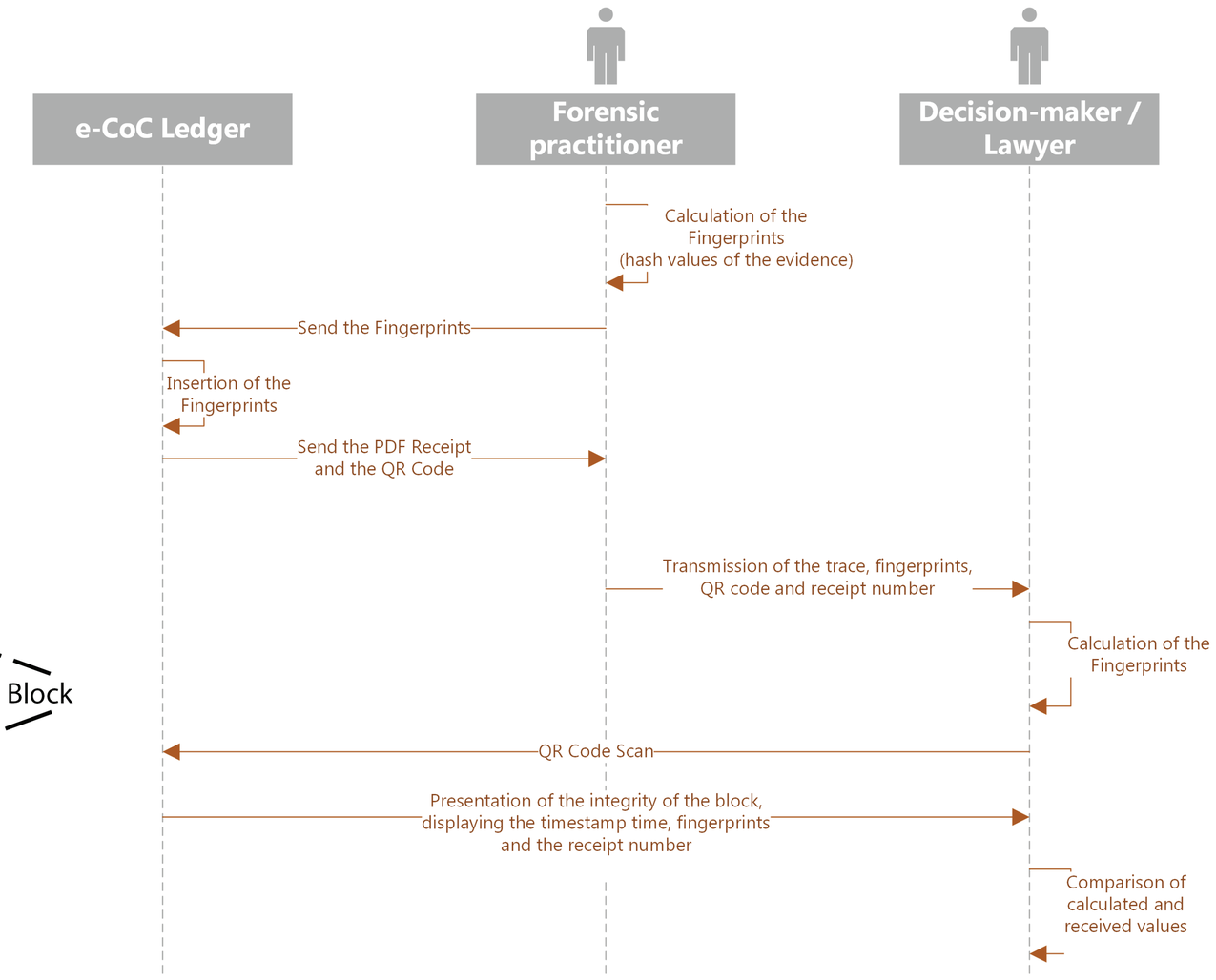
Solution Implemented

Solution requirements

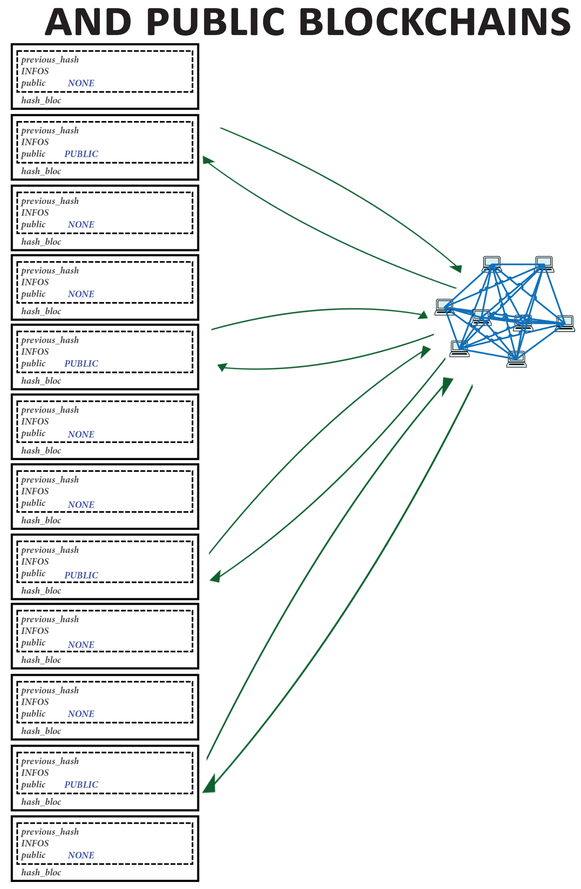
- Reliability
- Integrity
- Tamper-Evident
- Timestamped
- Privacy preserving
- Scalable
- Ease of use



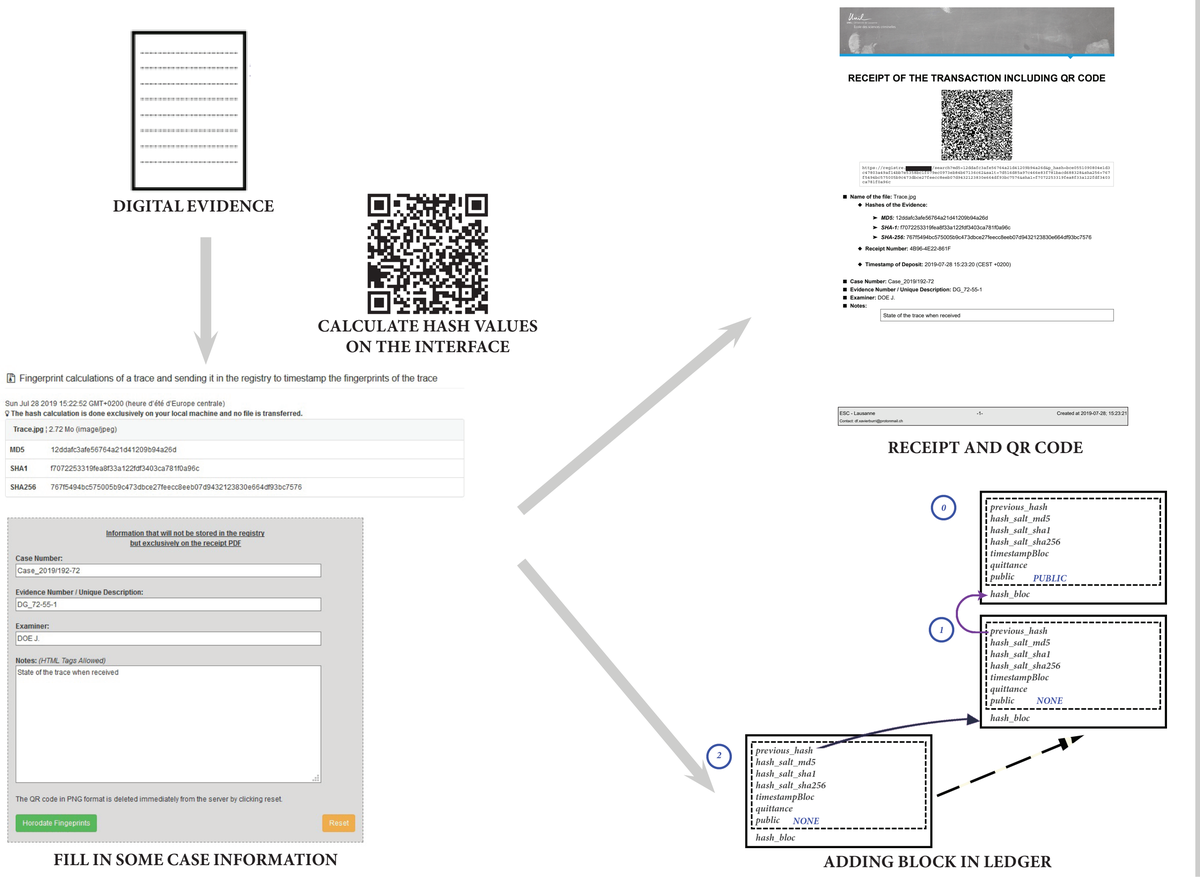
Process of using the Ledger



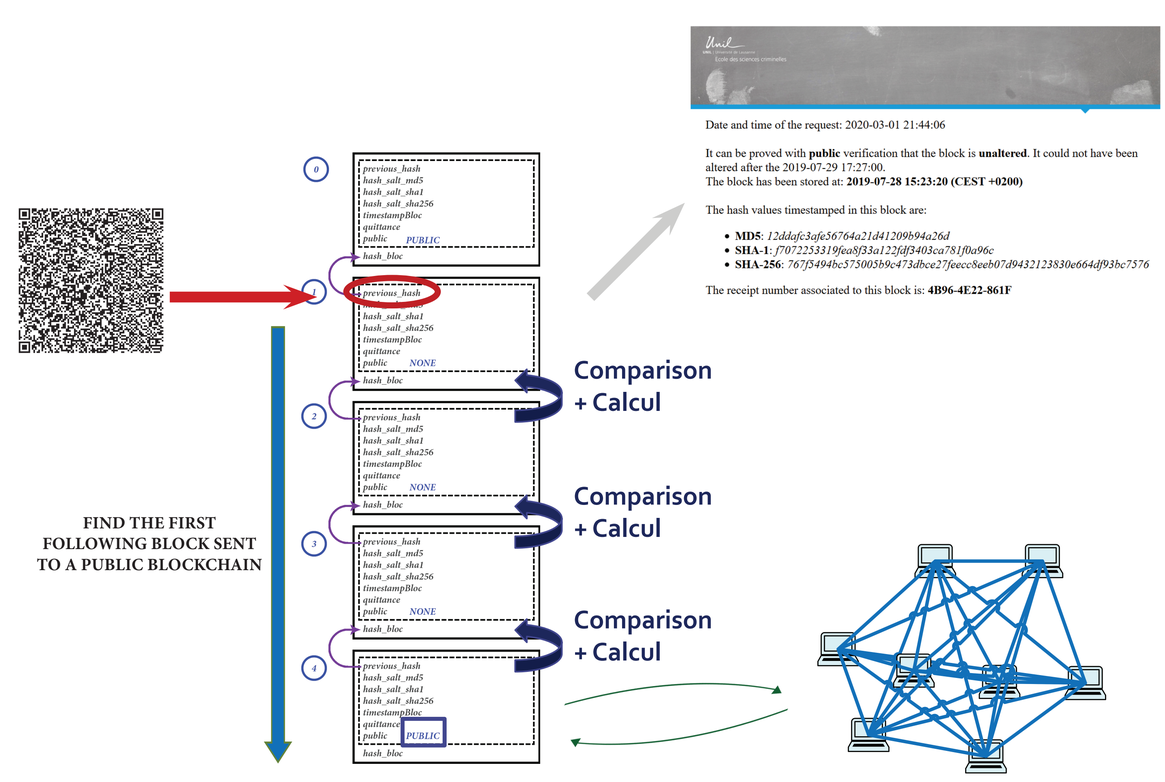
Relation between ledger and public blockchains



Timestamping the digital evidence hash values



Verification of the timestamp



Further Work

- Use of the Ledger without the interface
- Integration in forensics tools
- Use Hyperledger Composer as Ledger

Conclusion

- Solution for timestamping digital evidence hash values
- Use of public blockchain to anchor some state of the ledger
- Storing salted hash values for privacy reason
- Support work of digital forensics examiner

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