

Sirris Internship (ULB)

AuditTrust: Blockchain-based secure audit trail for data sharing in distributed environment.

1. Internship description

Under Icity FEDER project, Sirris is investigating different technologies for building trust in data, especially, for data shared between different entities in distributed system environment. One of the key factors in building data trust is to ensure that data being shared/used is correct, accurate & have not been manipulated. Moreover, the ability to trace and audit data usage/processing since its creation till its final destination is also an important key component in data trust building. However, for audit trail data to be useful, it must be accurate and tamper-proof. In this project, we envisage to use Blockchain technology, given its immutability property, to guarantee tamper-proof of audit trail data.

The internship will focus on designing and prototyping a secure blockchain-based data usage audit trail system. The first phase of the internship will focus on (1) the requirements analysis based on the pre-defined use cases, (2) the design of system architecture and security components and (3) the design of audit trail log structure together with blockchain transaction structure. The second phase will mainly focus on (1) Blockchain technology selection and (2) the development of a system prototype based on the results of the first phase, followed by system testing and validation.

2. Practical Details

We assume the student has basic knowledge about security principles and blockchain technology (or willing to learn Blockchain).

The internship is not paid and takes place in Sirris premises in Brussels (BluePoint Building, Boulevard A. Reyers 80, 1030 Brussels) or at another agreed working facility. Sirris has an informal and social working environment with flexible office hours. English will be the main working language.

Sirris is a non-profit and industry-driven knowledge center founded by Agoria, the federation of the Belgian technology industry. Sirris helps Belgian companies in the implementation of technological innovations, by providing companies with technological advice, by supporting companies in the definition and realization of innovation projects, and by setting up and participating in European R&D projects. Sirris is active in several domains, among which Software Engineering and ICT.

3. Contact Information

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