

MAST - Modular Automated System for Data Trust Centers

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Data trust centers facilitate the legally secure, confidential exchange of sensitive data between data providers and data users. Many data trust centers have not yet automated their complex processes involving organizational, legal, and technical aspects. Advantages of automation of these processes are the increase of speed and efficiency of workflows through standardization, a lower need for specialists and a higher scalability. Furthermore, aside from simple anonymization of identifying attributes, there are no standards or best practices for ensuring the nonidentifiability of data. To verify the nonidentifiability of the data, time-consuming manual work is required. Existing software for setting thresholds for nonidentifiability factors such as k-Anonymity and l-Diversity is not easy to integrate into existing processes of data trust centers. Our goal is to develop a web-based modular open-source software system building on existing software (e.g. gICS, gPAS, E-PIX) to minimize manual work in data trust centers by automation of time-consuming processes such as ensuring nonidentifiability, consent management, record linkage, management of data access rights and permissions. As part of a requirements analysis, we designed and evaluated a questionnaire completed by 13 data trust centers to ensure the modular software system aligns with their needs. Moreover, we aim to develop best practices and standards to ensure the nonidentifiability of personal data. In addition to faster and more efficient workflows, due to the development of quality standards this software system allows a faster integration of new processes as well as a higher transparency and trustworthiness.

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