

Privacy preserving vaccinating- and testing-pass for the European Union

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Abstract

Physicians and scientists hope that health-data will provide new insights into improving medical care and optimizing healthcare costs. However, data protection laws in Europe often place limits on the use of patient data. During the COVID-19 pandemic, both digital immunity records and data on infections were needed for pandemic management. Using this example, the research project aims to create a system concept for vaccination, testing, and recovery proof called P3VT (Privacy Preserving Pass for Vaccination and Testing), that will make collected data available to research and policy pandemic management in real time and anonymized. P3VT was developed consistently considering the goals of privacy-by-design, data minimisation and transparency of the EU-GDPR. Expert interviews validated the system from medical, technical and privacy perspectives. P3VT offers the following advantages compared to the EU digital COVID certificate: Pseudonymized proof of vaccination, testing, and recovery, reducing misuse of sensitive personal data Transparency about the nature, timing, and purpose of the proof strengthens user trust Use of anonymous data improves pandemic management, and research P3VT is thus an exemplary solution for the comprehensive provision of health-data for research purposes in combination with high level of data protection. Further areas of application are conceivable.

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