An Extensible Framework for Portability of Personal Data

Context
With the upcoming European General Data Protection Regulation (GDPR), people will have the right to receive “their” personal data from the service providers they previously provided these data to. In particular, Art. 20 of the GDPR prescribes that these data must be provided “in a structured, commonly used and machine-readable format” to allow for an easy switchover to another service provider. Obviously, this regulation targets the “lock-in effect” and thus challenges the business models of platform providers for social media, fitness data, connected homes, and many more.

Problem
The clear intention of the regulation notwithstanding, it currently is largely unclear how the right for data portability is to be implemented technically. With a “lingua franca” covering any potential type of personal data being largely unrealistic, however, much speaks in favor of a dynamically extensible framework allowing people to retrieve personal data from one service provider, to convert it to a different representation and then to feed it into other providers’ platforms. So far, however, such a framework does not exist.

Approach
In order to demonstrate the technical feasibility of the right to data portability, a respective framework is prototypically implemented, including an appropriate user interface. Its viability is to be proven for at least 5 different source and target platforms selected together with the thesis adviser. The concrete approach (user-run application, third-party “migration service”, etc.) as well as the technologies used are chosen by the candidate. All activities rest upon solid analysis and monitoring of policy givens, standardization activities etc. Results are to be critically discussed in these regards, too.

Skills: Strong analytical and programming skills, interest in legal and economic aspects of information systems engineering.