A propos du centre ou de la direction fonctionnelle

The team consists of two CS researchers, Nataliia Bielova (PI) and Cedric Lauradoux (co-PI). Nataliia is an expert in privacy protection in Web applications and Web tracking technologies. Cedric is a privacy researcher with a very strong background in cryptography. Additionally, one Law postdoc will join the project. Data4US will also benefit from the network of connections with Law researchers established at CPDP conferences, PrivaWeb 2019 workshop and Grenoble Alpes Data Institute.

Mission confiée

General Data Protection Regulation (GDPR) regulates collection of personal data, but today users' data is still silently collected as they browse the Web. GDPR empowers users with the rights to access their own data, but users have no means to exercise their rights in practice. In Data4US, we propose a new architecture for exercising access rights that will explain the users whether their data has been legally collected and eventually help contact DPAs for further investigations.

Principales activités

The postdoc hired in Data4US project will contribute to two challenges:

Challenge 1 - Showing to users when Web tracking is illegal: Multiple studies by Computer Science researchers, including our own, have demonstrated the prevalence of third party tracking on the Web. However, Computer Scientists alone cannot analyze legal requirements to conclude whether a certain type of tracking is legal or not. Law researchers have analysed what kind of tracking is illegal according to GDPR and other legal sources, but only in theory: Law researchers need technical validation when interpreting legal sources and applying them to the concrete cases.

First challenge is to provide a tool for the users to log and monitor tracking performed by third parties by building upon our previous work [1]. We will show to the users how third parties are tracking their activity on the Web. The novelty is in identifying when tracking activity is illegal and explaining it back to the users. Notice that general public might not be able to understand the concepts of illegal tracking, we hence will aim explanations only at domain experts at this stage of the project.

Challenge 2 - New Web architecture for exercising GDPR rights: In our previous joint work [2], we have discovered that Subject Access Request (SAR) procedures that implement GDPR access rights, though compliant with the law, are suffering from a number of security vulnerabilities and implementations that can lead to data breaches. The problem is that the same technology that is used to track users (such as cookies) was not initially designed to identify users. Cookies (as many other digital identifiers) are chosen by third parties on the server side and stored on the client side (in the browser). Cookies can subsequently be changed in the browser or, if not properly secured, even stolen by network attackers. As a result, cookies are not sufficiently secure to be used to reclaim the data associated with a Subject Access Request and to prove data ownership. For this reason, today many third parties refuse SAR and don't provide access to users' data.

We aim to change this paradigm and to let the user generate his/her cookies on the client side by elaborating our recommendations from our joint work [2]. By using cryptographic schemes we then provide an easy and safe mechanism for a user to claim and prove ownership of the data by the third parties of such a technology, we will need to collaborate with Law researchers and eventually Policy makers to demonstrate that there is an obligation of means and of results to have technologies allowing proof of ownership approved by the future laws.

References:


Compétences

- PhD degree in Law.
- A strong interest to understand technical aspects of Web applications.
- Fluent English required, both oral and written. Knowledge of French is not required.
- Knowledge of Data Protection Law, such as GDPR and ePrivacy is strongly recommended.

Avantages

- Subsidized meals
- Partial reimbursement of public transport costs
- Leave: 7 weeks of annual leave + 10 extra days off due to RTT (statutory reduction in working hours) + possibility of exceptional leave (sick children, moving home, etc.)
- Possibility of teleworking (after 6 months of employment) and flexible organization of working hours
- Professional equipment available (videoconferencing, loan of computer equipment, etc.)
- Social, cultural and sports events and activities
- Access to vocational training
- Social security coverage

Rémunération

Gross Salary: 2653 € per month