

Questionnaire

We used the interview guide below provided by Hadar et al. [1], and we also added item 9 regarding elicitation and specification of privacy requirements.

- 1. Background information
 - 1.1 - Domain (of development), position, years of experience, number of subordinates, formal education, additional professional training
 - 1.2 - What sources of knowledge do you use beyond the requirements of the customer? (Colleagues? Friends outside the organization? Literature? Professional journals? Web? Other?)
 - 1.3 - Have you been involved in the development of information systems that handle information about users or other data subjects? If so, please describe your role in each project.
 - 1.4 - Have you acquired knowledge/education specifically related to privacy concerns in information systems? If so, please describe.
 - 1.5 - What development methodologies do you use?
 - 1.6 - Do you have direct communication with the customer?
 - 1.7 - When you take design decisions, do they affect others in the development team? If so, who is affected (and how many)? What are their roles?
- 2. Privacy definition
 - 2.1 - What is informational privacy?
 - 2.2 - What is the difference between security and privacy?
- 3. Information sources
 - 3.1 - What sources of information do you use in order to resolve privacy concerns?
 - 3.2- (Internet / what sites? Organizational procedures? Managers? Other employees? Literature (which)?)
- 4. Guidelines
 - 4.1 - What laws are you familiar with, in the context of informational privacy?
 - 4.2 - What procedures are you familiar with, in the context of informational privacy?
 - 4.3 - What norms are you familiar with, in the context of informational privacy?
- 5. Cases and examples
 - 5.1 - When you encounter a privacy concern, what do you do about it?
 - 5.2 - In what cases do you consider or analyze privacy concerns, while designing a system?
 - 5.3 - When developing a system, what are the potential risks regarding privacy?
 - 5.4 - Describe three examples of projects you were involved in, in which privacy concerns were discussed. What aspects of privacy did you handle?
 - 5.5 - Are privacy concerns considered, in projects you are involved with, while designing user interfaces? If so, in what context?
 - 5.6 - Do you initiate discussions regarding privacy or require clarifications or additional privacy-related requirements when designing a system?
 - 5.7 - Is privacy taken into account when planning for future requirements?

- 6. Familiarity and use of privacy strategies
 - 6.1 - What strategies (presented in Table. 1) are you familiar with as solutions for privacy concerns?

Table 1. List of privacy strategies

Strategy	Familiar Uses with
<ul style="list-style-type: none"> - Decentralization of data so there is no central access point for all data - Collected data is regularly deleted after usage - Providing users control over privacy settings: What would be revealed to other users or system operators - Optional turn off of overall data collection for a certain time frame Encryption technologies - Data anonymization for management and analysis purpose - User transparency about his/her information that is available in the system - Systems that enable users to access personal information about them, which resides within the system - Systems that enable users to delete personal information about them, which resides within the system - Automatic expiration of personal information 	

- 6.2 - (Bring examples)
- 6.3 - For each of the following strategies, please specify whether you are familiar with it, whether you use it, and why / in what cases do you decide not use it?
- 7. FIPPs
 - 7.1 - Does the organization inform its users about its privacy policy?
 - 7.2 - During your work, have you ever needed to address concerns of notifying users about ongoing operations or information theft? If so, how? At what stage?
 - 7.3 - In your opinion, to what extent is it important to receive consent from users prior to collecting private data about them?
 - 7.4 - In your opinion, to what extent do the users have the right to choose how, when and what information is gathered about them (that is, the freedom to design the information that is collected about them)?
 - 7.5 - Do you think that user consent for data collection should be opt-in (default is lack of consent, and requires active action to give consent) or opt-out (default is agreement, and requires active action to deny consent)?
 - 7.6 - Have you ever dealt with user consent in this context? In what stage of the development? Who raised the need? Is the topic of user consent discussed during projects?

7.7 - Do you, or the customer (for whom the system is designed), define the purpose for which the information is collected by the system?

7.8 - How do you decide what information is collected by the system? What are the considerations? Are they determined according to customer requirements? According to common practices? Some other criteria?

7.9 - Is the legitimacy of the purpose for which personal information is collected by the system discussed? Do you ever ask yourself if a specific purpose of collecting personal information is legal/problematic in any sense?

7.10 - In your opinion, should personal information accumulated about users in the system be deleted? If so, after how much time should it be deleted? (Immediately after the use of the information? after one month? three months? one year? two years? five years? ten years?)

– 8. Responsibility

8.1 - Is information privacy considered to be the responsibility of the architect?

8.2 - (If not): Whose responsibility is it?

– 9. Elicitation and Specification of Privacy Requirements

9.1 - How does the requirements identification process currently occur? What was it like before? Is privacy considered? Do you agree? How could it be improved?

9.2 - How does the requirements specification / documentation process currently occur? What was it like before? Is privacy considered? Do you agree? How could it be improved?

– 10. Open discussion

10.1 - Do you have any other thoughts about informational privacy you would like to share?

10.2 - Why did you agree to be interviewed for this research?

References

1. Hadar, I., Hasson, T., Ayalon, O., Toch, E., Birnhack, M., Sherman, S., Balissa, A.: Privacy by designers: software developers' privacy mindset. *Empirical Software Engineering* **23**(1), 259–289 (2018)