Privacy & Usability

The perspective of a Data Protection Commissioner

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Data Protection Commissioner
Schleswig-Holstein, Germany

Privacy & Us
Kiel, 1 July 2019
Overview

- Privacy & Usability going together
- Requirements from the GDPR
  - Principles
  - Information
  - Data Protection by Design and by Default
- Adverse effects
- Conclusion
**General remarks**

- Usability is a **requirement for all interaction** with human beings.
- In the field of privacy and data protection:
  - Support*) of data subjects
  - Support*) of users on behalf of data controllers and data processors
  - *): Support means:
    - facilitate data-protection friendly actions,
    - prevent undesired actions,
    - proper defaults

- “Non-usability” as a suitable measure for data protection?
  - "*Our system is so complex that an attacker could not understand it...*
  - Security... by obscurity √ NO!
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Data protection principles

Whenever personal data are processed,
Art. 5 (1) GDPR:
  a) ‘lawfulness, fairness and transparency’
  b) ‘purpose limitation’
  c) ‘data minimisation’
  d) ‘accuracy’
  e) ‘storage limitation’
  f) ‘integrity and confidentiality’

Art. 5 (2) GDPR:
  ‘accountability’
Article 83

General conditions for imposing administrative fines

1. Each supervisory authority shall ensure that the imposition of administrative fines pursuant to this Article in respect of infringements of this Regulation referred to in paragraphs 4, 5 and 6 shall in each individual case be effective, proportionate and dissuasive.
Article 83

General conditions for imposing administrative fines

5. Infringements of the following provisions shall, in accordance with paragraph 2, be subject to administrative fines up to 20 000 000 EUR, or in the case of an undertaking, up to 4 % of the total worldwide annual turnover of the preceding financial year, whichever is higher:

(a) the basic principles for processing, including conditions for consent, pursuant to Articles 5, 6, 7 and 9;

(b) the data subjects' rights pursuant to Articles 12 to 22;
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**Consent**

- "‘consent’ of the data subject means any freely given, specific, informed and unambiguous indication of the data subject's wishes by which he or she, by a statement or by a clear affirmative action, signifies agreement to the processing of personal data relating to him or her;" – Art. 4 No. 11 GDPR

- "If the data subject’s consent is given in the context of a written declaration which also concerns other matters, the request for consent shall be presented in a manner which is clearly distinguishable from the other matters, in an intelligible and easily accessible form, using clear and plain language." – Art. 7 (2) s. 1 GDPR

- "It shall be as easy to withdraw as to give consent." – Art. 7 (3) s. 4 GDPR
Data subjects’ rights: information

• “The controller shall take appropriate measures to provide any information referred to in Articles 13 and 14 and any communication under Articles 15 to 22 and 34 relating to processing to the data subject in a concise, transparent, intelligible and easily accessible form, using clear and plain language, in particular for any information addressed specifically to a child.” – Art. 12 (1) s. 1 GDPR

• “The information to be provided to data subjects pursuant to Articles 13 and 14 may be provided in combination with standardised icons in order to give in an easily visible, intelligible and clearly legible manner a meaningful overview of the intended processing. Where the icons are presented electronically they shall be machine-readable.” – Art. 12 (7) GDPR
Simplify your information

Everything should be as simple as possible, but not simpler.

- Albert Einstein

Source: Karolina Grabowska via Pixabay
Formulas for clear text: readability

https://saskia-vola.com/simple-metrics-for-textmining

- Readability according to Carl-Hugo Björnsson, 1971: higher for simple texts that consist of short sentences and short words

  \[
  \text{LIX(text)} = \frac{\text{TotalWords}}{\text{Sentences}} + \frac{(\text{LongWords} \times 100)}{\text{TotalWords}}
  \]

- Typical LIX values between 20 (newspaper) and 70 (research paper)
Formulas for clear text: informativity

https://saskia-vola.com/simple-metrics-for-textmining

- **Informativity**: higher when there are a lot of pieces of information one could capture without knowing the context or the author
- Relative amount of content words to non-content words
- **Content words**: nouns, proper nouns, verbs, and adjectives

- The content function ratio (CFR):
  \[
  CFR(\text{text}) = \frac{\text{AmountOfContentWordTags}}{\text{AmountOfFunctionWordTags}}
  \]
# Comprehensibility index of the University of Hohenheim

<table>
<thead>
<tr>
<th>Formeln</th>
<th>Text-Parameter</th>
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</thead>
<tbody>
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<td>Amstad-Formel</td>
<td>Durchschnittliche Satzlänge in Wörtern</td>
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<tr>
<td>Wiener Sachtext-Formel</td>
<td>Durchschnittliche Satzteillänge in Wörtern</td>
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<td>SMOG-Index (Deutsch)</td>
<td>Durchschnittliche Wortlänge in Buchstaben</td>
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<td>Lix Lesbarkeits-Index</td>
<td>Anteil der Wörter mit mehr als 6 Buchstaben</td>
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<td>Anteil der Satzteile mit mehr als 12 Wörtern</td>
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<tr>
<td></td>
<td>Anteil der Sätze mit mehr als 20 Wörtern</td>
</tr>
</tbody>
</table>

**Abbildung 4: Hohenheimer Verständlichkeits-Index**


https://klartext.uni-hohenheim.de/hix

Scale 0-20, e.g.
- doctoral thesis political science: 0-4
- BILD 16-20
**Hohenheimer Index by TÜV**

Abbildung 1: Maschinelle Textanalyse


Multi-language?
Example: “Datenschutz-Steckbrief”

- “data protection briefing”

- 2-page mini policy for giving information according to Art. 13 GDPR

Tätigkeitsbericht 2019 des ULD S-H, Tz. 6.1.4: https://uldsh.de/tb37
Example: Transparency for “Bell Camera”

Name und Kontaktdaten des Verantwortlichen:
Unabhängiges Landeszentrum für Datenschutz
Holstienstraße 98
24103 Kiel
mail@datenschutzzentrum.de
0431/9881290

Kontaktdaten des Datenschutzbeauftragten:
bdsp@datenschutzzentrum.de
0431/9881290

Zweck und Rechtsgrundlage der Datenverarbeitung:
Einlasskontrolle im Rahmen der Wahrnehmung des Hausrechts gemäß § 14 Abs. 1 Nr. 2 Landesdatenschutzgesetz (LDSG)

Funktionsweise der Kamera und Gegensprechfunktion:

Informationen zu Ihren Rechten erhalten Sie auf unserer Website:
www.datenschutzzentrum.de/datenschutzerklaerung
Example:

Transparency of a more complex scenario

Information about embedded “Yellow dots” in colour copies

Tätigkeitsbericht
2019 des ULD S-H,
Tz. 10.4:
https://uldsh.de/tb37

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Data Protection by Default

Article 25

Data protection by design and by default

2. The controller shall implement appropriate technical and organisational measures for ensuring that, by default, only personal data which are necessary for each specific purpose of the processing are processed. That obligation applies to the amount of personal data collected, the extent of their processing, the period of their storage and their accessibility. In particular, such measures shall ensure that by default personal data are not made accessible without the individual's intervention to an indefinite number of natural persons.

“by default”: data protection-friendly pre-settings as a starting point for all data processing!
Data Protection by Default vs. Usability

- Default setting always relevant – depending on the purpose!
- Changes are possible, but require intervention from user

Examples for (changeable) data protection defaults:
- Less storage of personal data (necessity)
- Less storage outside the user’s control (e.g. no automatic phone number storage of an attempted call; secure device instead of cloud – limited accessibility)
- Less personalisation (if no explicit purpose – limited extent of processing)
- Earlier erasure of data (limited storage period)

- How strict?
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Presentation of information from the perspective of the data controller

- Presentation of information is always ...
  - ... a challenge because of different target audiences
  - ... incomplete
  - ... coloured

- E.g. communication of a personal data breach to data subjects (Art. 34 GDPR):

  “... shall describe in clear and plain language the nature of the personal data breach and contain at least the information and measures ...”

How to inform about risks? How to gain trust?
Better safe than sorry …

from the perspective of the data controller

Data controllers want legal certainty, thereby relying on legal standards that for decades have been accepted before courts.
Adverse design patterns

- Greedy apps and services

- Tricking users into disclosing more data (various psychological tricks):
  - “Profile completed” as status info
  - “We miss you” for contact reason
  - Loss Aversion
  - Illogical Reasoning
  - Perception of Scarcity, Fear of Missing Out (“you are missing ...”)
  - ...

“Dark Patterns”!

Forbrukerrådet (Norway 2018): Report „Deceived by Design“, https://www.forbrukerradet.no/dark-patterns/
As the screenshots below illustrate, the Facebook GDPR popup requires users to go into “Manage data settings” to turn off ads based on data from third parties. If the user simply clicks “Accept and continue”, the setting is automatically turned on. This is not privacy by default.

## Deceived by Design

<table>
<thead>
<tr>
<th>Feature</th>
<th>Facebook</th>
<th>Google</th>
<th>Windows</th>
<th>Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>No privacy intrusive default settings in popups</td>
<td>✗</td>
<td>✗</td>
<td>✚</td>
<td>4.1</td>
</tr>
<tr>
<td>Equal ease (number of clicks) for privacy friendly options in popups</td>
<td>✗</td>
<td>✗</td>
<td>✚</td>
<td>4.2</td>
</tr>
<tr>
<td>Design (colours and symbols) does not lead toward privacy intrusive option in popups</td>
<td>✗</td>
<td>✗</td>
<td>✚</td>
<td>4.2</td>
</tr>
<tr>
<td>Language does not lead toward privacy intrusive option in popups</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>4.3</td>
</tr>
<tr>
<td>Privacy friendly options in popups come without “warnings”</td>
<td>✗</td>
<td>✗</td>
<td>✚</td>
<td>4.4</td>
</tr>
<tr>
<td>Users can clearly postpone the decision while accessing the service in the meantime</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>4.5</td>
</tr>
</tbody>
</table>

[https://www.forbrukerradet.no/dark-patterns/] (2018)

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• **Usability** is relevant; starting point “data protection by default”

• **Data protection commissioners** are not trained in usability issues → info needed

• **Fines/sanctions** for deficiencies caused by bad usability? → evidence needed

• **Standing shoulder-to-shoulder** with consumer protection

• GDPR as game changer?
  - Promise of a level playing field
  - We are not there, yet!