What are PETs for Privacy Experts and Non-experts?
Houda El mimouni*, Erica Racine*, Patrick Skeba**, Eric P. S. Baumer**, Andrea Forte*
*Drexel University, Philadelphia, PA | **Lehigh University, Bethlehem, PA

ABSTRACT

• Which technologies are viewed as enhancing privacy?
• Differences between privacy experts and non-experts
• Opportunities for design

RELATED WORK

Existing Privacy literature numerous privacy adoption aspects:
• What shapes online privacy practice: Experience of privacy violation rather than expertise (1) and socio-economic factors (2).
• Differences in how experts and novices think about privacy or use specific applications: non-experts displayed a strong distinction between private and public spaces, while experts were more likely to illustrate more nuanced data privacy spaces and control over information (3). And experts showed a deeper understanding of Tor’s underlying operation and focused more on the technical details of Tor’s operations, while non-experts were more likely to situate Tor within a broader sociotechnical landscape (4).
• Models that explain rationales that may guide adoption of PETs (5) like lack of awareness, lack of technical skill, the complexity and diversity of risks involved in privacy management, direct and indirect costs, and privacy not being a cultural value (6). Also, usability issues (7).

Remaining Research Question

How do people, especially laypersons, determine what counts as a privacy-enhancing technology?

OBJECTIVE

Understand what makes a technology a PET—not based on scholarly definitions but grounded in everyday practices and perceptions by cataloging the technologies identified as privacy enhancing by privacy experts and by non-experts.

METHOD

We used a survey to inventory what technologies people report using in their everyday lives to protect their privacy.

Recruitment

• We recruited privacy experts by soliciting participants from the PETs and HCI privacy research communities
• We recruited non-experts using a demographically-matched panel procured by Qualtrics.
• Recruitment efforts yielded 46 responses from privacy experts and 77 from non-experts (see Table below for demographics for both samples)

Survey Protocol

An identical survey was deployed to the expert and non-expert samples. The survey asked participants to list technologies they are familiar with in multiple categories: browsers with privacy features in technologies other than privacy protection. Tools should also consider deployability and ease of use.

FINDINGS

1. PETs Familiarity

<table>
<thead>
<tr>
<th>Technology</th>
<th>Privacy Experts</th>
<th>Non-privacy Experts</th>
</tr>
</thead>
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<tr>
<td>Signal</td>
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<td>4</td>
</tr>
<tr>
<td>DDG</td>
<td>39</td>
<td>5</td>
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<tr>
<td>Tor Br</td>
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<td>5</td>
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<td>W/app Brave</td>
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</tr>
<tr>
<td>IE</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

2. PETs frequency of use

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SUMMARY OF FINDINGS

- Most of the technologies that were popular among non-experts advertise main functions other than privacy protection.
- Most of the popular technologies cited by experts promote privacy protection as a primary function.

IMPLICATION

To ensure that PETs are adopted more broadly, designers of Internet tools should also consider embedding robust, sophisticated privacy features in technologies that have some primary function besides privacy enhancement.

REFERENCES


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