

Characterizing Digital Homelessness

CONTRIBUTIONS:

- **Identification of population** - We characterize a unique population experiencing Digital Homelessness.
- **User Study** - We capture the needs of this population through interviews.
- **Design Goals** - We identify two key assumptions of traditional security lacking in this space.

IDENTIFICATION OF POPULATION:

We define Digital Homelessness as being disadvantaged by not having access to one's own computer and internet access.

This population is typically understudied, and does not meet some basic assumptions of traditional security and privacy mechanisms.

USER STUDY:

Methods:

- 39 interviews between the Lawrence Public Library (LPL) and Kansas City Public Library's main and west branches
- Participants, a mixture of staff and patrons, were compensated \$25.

Observations:

- Risk of local and network interception of sensitive data
- Systems used for job searching, social media, banking, and news
- Some patrons did not have any other means to perform computing tasks.
- Many patrons had low technical literacy.

Exclusive users of public computers are **resource-limited, transient, less private, and more vulnerable** to digital threats



Additional information: <https://ittc.ku.edu/padlock/dh>

User Study Fieldnotes:

"Most people... aren't able to differentiate between an authentic emergency message and a website pop-up, or a redirect."

[LPLS-001]

"I don't want anybody to look over my shoulder..." [LPLP-001]

"The acceptance that as hard as I fight and hard as I try to protect my identity, there's always going to be more clever [adversaries]."

[LPLP-015]

"He didn't know anything about computers, didn't care... I had to sit down with him and basically do it for him, but as soon as we got the car parts he needed up, he was throwing his credit card at me, throwing all the information that that thing needed."

[LPLS-002]

"But living alone, there's no way I would feel comfortable being completely cut off." [LPLP-015]

"I can't change credit card information and stuff on my phone, so that makes it pretty difficult to manage a website like that."

[LPLP-002]

DESIGN GOALS:

We extract three key requirements for systems addressing digital homelessness.

Personalization: Users' ability to customize their workspace to better fit their needs and ensure best security practices

Persistence: Maintain workspace continuity between sessions

Low Barrier to Entry: Systems do not require advanced computing knowledge to operate effectively.

The absence of these features means that many users lack the ability to employ best practices while using public computers.

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