User-Tailored Privacy by Design

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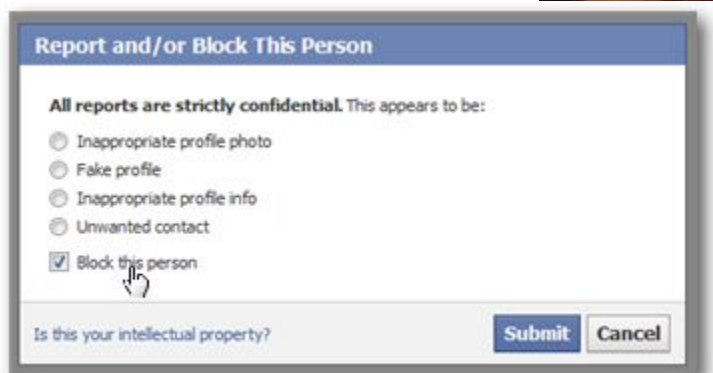
Introduction

Privacy:

- *Prevent* information access
- Information distributed by individual
- System to *protect* user

Privacy: Beyond Information Access

Supporting user's preferred privacy management strategies:

Blocking

Withholding

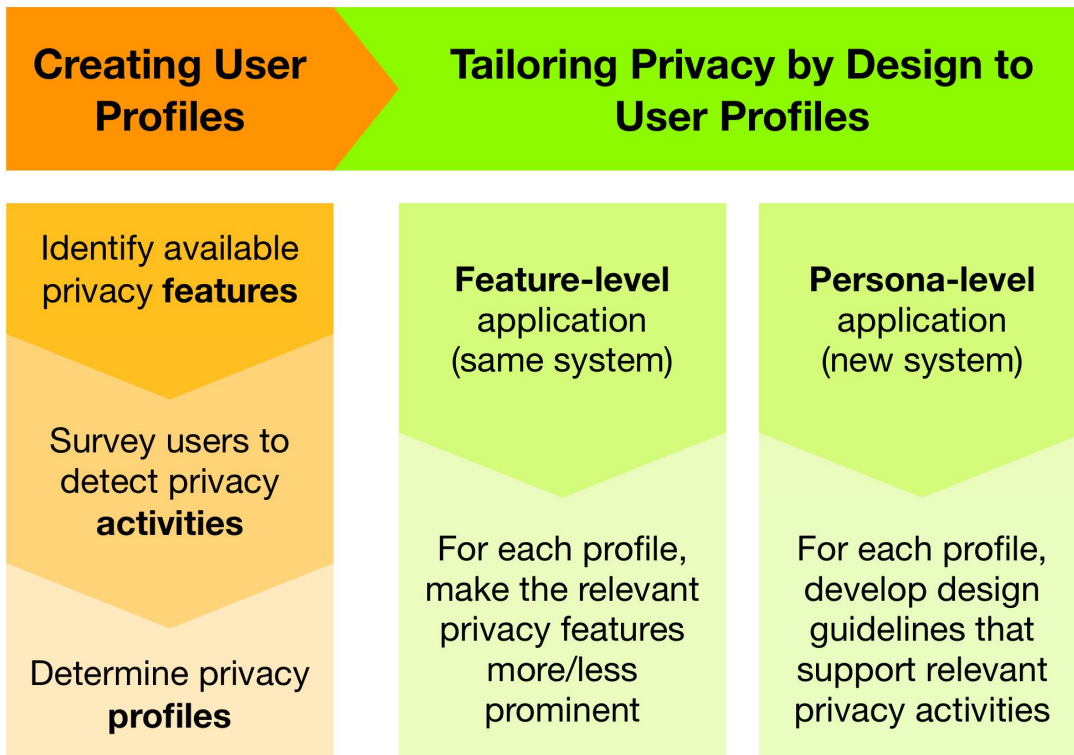Untagging

Privacy By Design

- Privacy addressed early in system development
- Tries to avoid privacy problems
- Criticism is…it doesn't address variations of all users
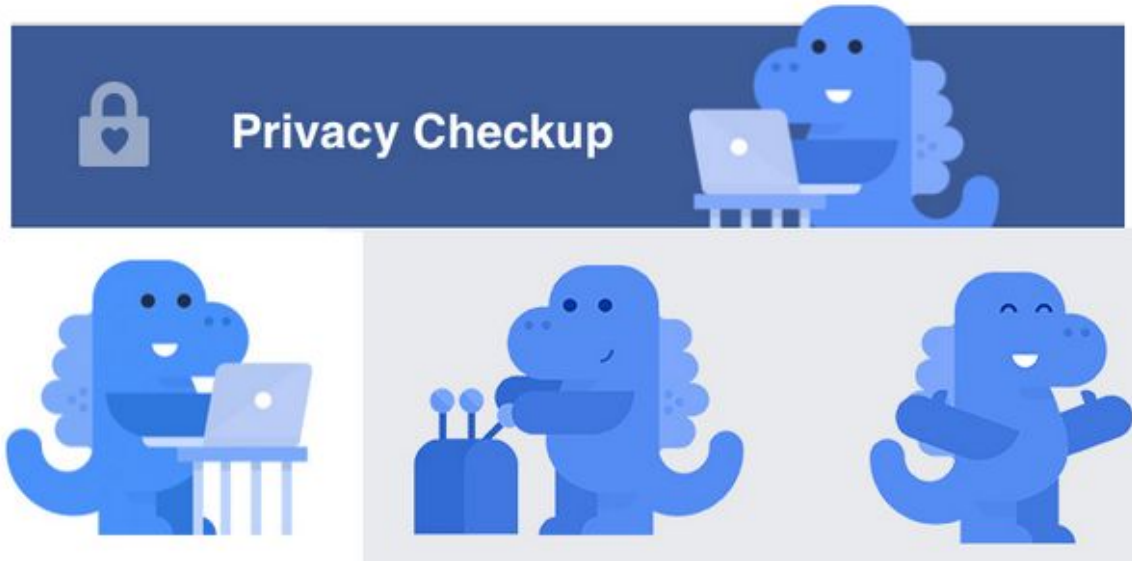
User Tailored Privacy

- System supports users' management strategies
- Tailors user interface for privacy features
- Including:
  - Withholding information
  - Restricting chat
  - Selectively sharing

User-Tailored Privacy by Design Framework

Creating User Profiles

Tailoring Privacy by Design to User Profiles

Identify available privacy **features**

Survey users to detect privacy **activities**

Determine privacy **profiles**

Feature-level application (same system)

For each profile, make the relevant privacy features more/less prominent

Persona-level application (new system)

For each profile, develop design guidelines that support relevant privacy activities

Profiling Facebook Users' Privacy Behavior

Supporting user's preferred privacy management strategies:

Privacy Behaviors on Facebook
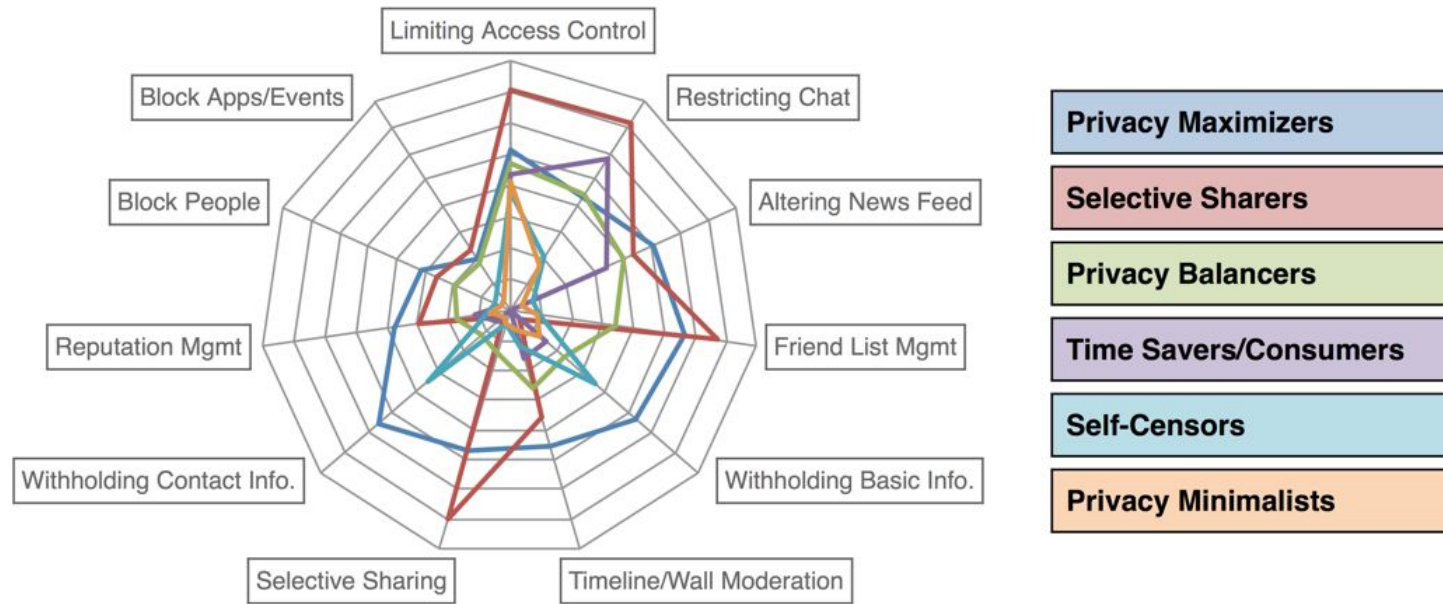
The six privacy management strategies uncovered by Wisniewski et al.

Six Facebook Privacy Profiles

Selective Sharers

Self-Censors

Time Savers

Privacy Maximizers

Privacy Balancers

Privacy Minimalists

Six Facebook Privacy Profiles

Selective Sharers

require a more restrictive default sharing setting

More prominent design of capabilities for:

- **selective sharing**
- friend list management
- blocking apps
- blocking people in their notification window
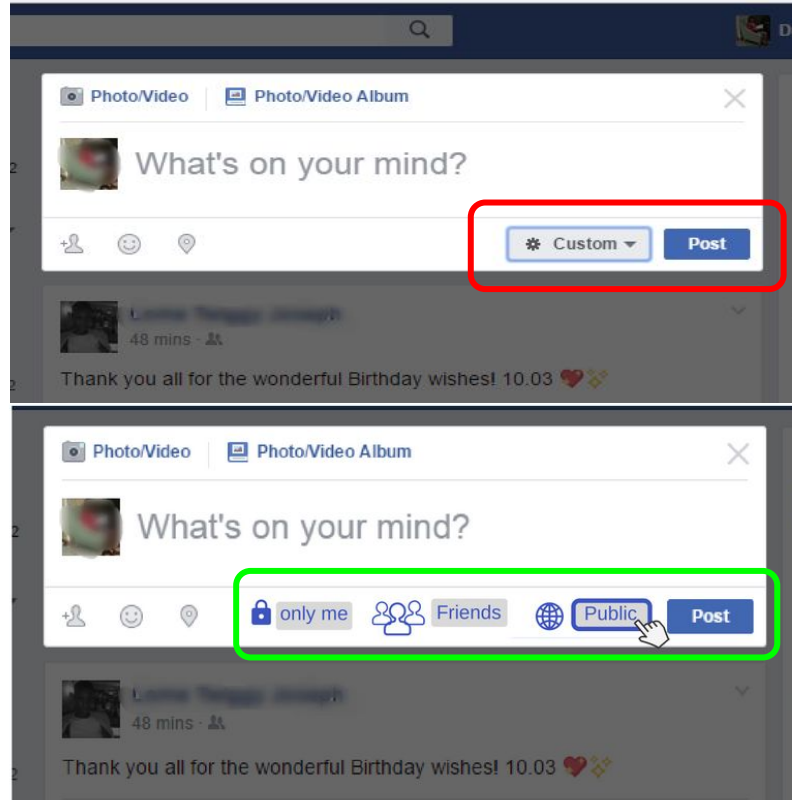
Six Facebook Privacy Profiles

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- selective sharing
- **friend list management**
- blocking apps
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Six Facebook Privacy Profiles

Self-Censors

benefit from their info being set to "only me" by default

Users in this profile may:
- "Only me" default setting for basic and contact information
- Reduce interface clutter

Six Facebook Privacy Profiles

Time Savers

require more prominent News Feed moderation features

Users in this profile may:
- Prefer to read information without messages or updates
- Alter news feeds through deleting content
- Edit their own posts and stories
- Create custom friends lists
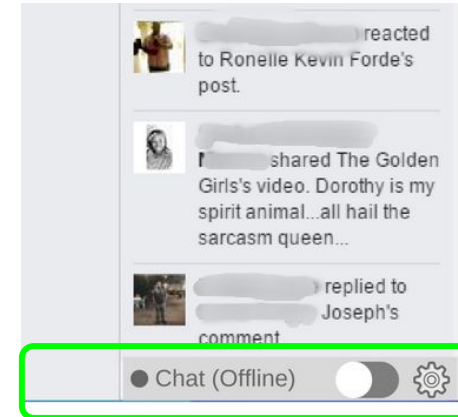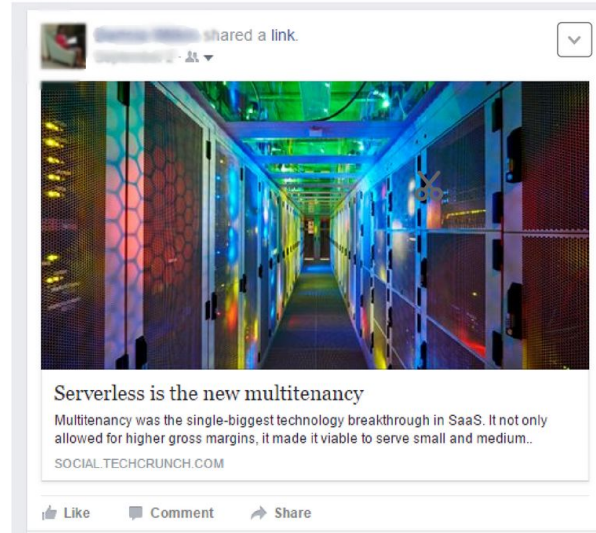
Six Facebook Privacy Profiles

Privacy Maximizers

require all of the functionalities previously described

Users in this profile may:
- Utilize all available privacy features
- Moderate posts
- Blocks apps, events, people
- Restrict chat accessibility
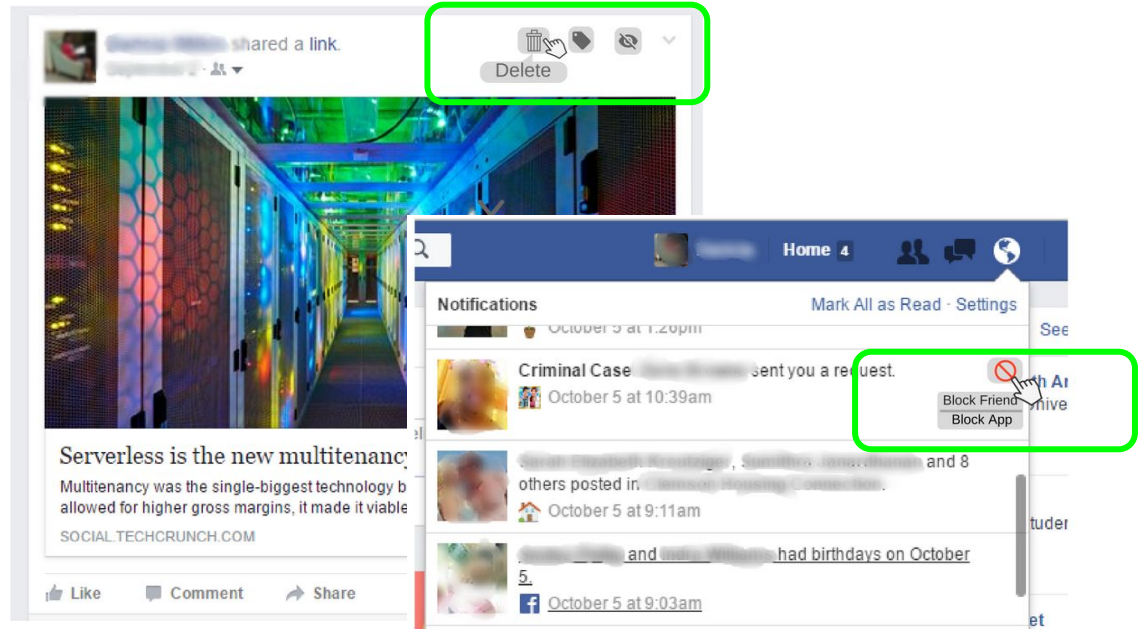
Six Facebook Privacy Profiles

Privacy Balancers

require more prominent controls to alter their News Feed and timeline

Users in this profile may:
- Show moderate levels of privacy management
- Prefer certain features over others

Six Facebook Privacy Profiles

Privacy Minimalists

Users in this profile may:
- Show lowest levels of privacy concerns
- Use interfaces as they are
- Little to no changes in privacy settings

Overview of the UTPbD solution for TLA

Self-Censors	Require functionality to share their information and training outcomes w/ applications and people
Selective Shares	Require mechanisms for the selection of learning material, and highly restricted forms of sharing learning outcomes
Time Savers	Should be able to opt out of active notifications and social features
Privacy Maximizers	Require all of the functionality described above
Privacy Balancers	Require mechanisms for curation, blocking, and avoiding direct interaction
Privacy Minimalists	Require systems that allow them to maximally benefit from their adaptive and social functionalities

Future Work

Current approach:

- Observe privacy management behaviors and make features easily accessible

Alternative methods:
- Highlight features that **fit within profile** but they are **not being used**

- Highlight features that **do not fit within profile** and are **not being used**

- Automate features