Code Definitions

The coding schema for “Privacy Nutrition Labels: Promise, Practice, and Paradoxes in Communicating Privacy” consists of eight major categories that collectively provide a rich description of research on privacy communication from different angles and perspectives. These categories are: community of focus, timing, method, user-centered, platform, product, issues, and third-party.

Community of focus

[Comm] stands for *Community of Focus*, indicating whether a paper targets one or multiple specific communities and whether the study is designed to address the unique privacy challenges faced by that community.

Comm-developer

The *Community of Focus* is classified as developers—specifically, mobile app developers—when a paper discusses developer tools, offers recommendations, or addresses developer use cases broadly.

Comm-user

The community of focus is users when the paper discusses raising mobile app users’ awareness of privacy labels, effectively communicating privacy, or addressing usability concerns.

Comm-regulator

The *Community of Focus* is classified as regulators when a paper examines tracking discrepancies, GDPR compliance, or similar regulatory concerns. In this context, a regulator specifically refers to a government-related agency or representative.

Comm-HCI designer

The *Community of Focus* is classified as HCI designers when a paper explores innovative approaches to communicating privacy policies or challenges, such as designing new privacy icons.

Timing

Timing refers to when privacy communication occurs, which can be categorized as either before or after a device or application has been acquired.

Timing-Before

Timing before refers to before a device or application is acquired; typically, as in the case of privacy labels of mobile apps, the privacy labels can be found *before* the user downloads the app.

Timing-After

Timing-After refers to privacy communication that occurs after a device or application has been acquired. In the case of mobile apps, this includes privacy consent notices presented while the app is in use—specifically, after the user has downloaded or installed it.

Timing-Independent

Timing-independent refers to the absence of dependence on whether a device or application has been acquired.

Method

Method refers to the approach or techniques employed in a study. Some studies use a single method, while others incorporate multiple methods.

Method-Survey Apps

The Survey Apps method involves examining apps and their privacy policies to observe privacy communication.

Method-Survey User/Developers

This refers to a study that conducts a survey to gather data from developers and/or users.

Method-Literature review

This method is typically used when the study is a literature review or survey, involving an extensive search of related work. It applies only to papers that are review-based.

Method-NLP

This method is used when the paper employs Natural Language Processing (NLP) techniques to understand and analyze privacy policies and other forms of communication.

Method-Focus/Interview

This method is used when the paper conducts interviews with developers or users or performs a focus group study.

Method-Static

This method means the paper uses static analysis to examine and evaluate app code

Method-Dynamic

This method means the paper uses dynamic analysis to examine the real-time behavior and interactions of apps.

Method-usability

This method means the paper employs usability testing to evaluate the user experience and effectiveness of privacy communication.

Platform

Platform refers to whether a study specifically focuses on a technology platform for researching privacy labels.

Platform-Google

Platform-Google refers to studies that focus on Google's Android mobile app development platform.

Platform-iOS

Platform-iOS refers to studies that focus on Apple's mobile app development platform.

Platform-IoT

Platform-IoT refers to studies that focus on IoT (Internet of Things) development platforms.

Platform-Other

Platform-Independent refers to studies that focus on platforms other than mobile or IoT, such as web browsers or social media platforms like Facebook.

Platform-Independent

Platform-Independent refers to studies that are not tied to any specific platform.

Product

Product refers to whether a study has produced concrete tools or recommendations that can be utilized by the broader community.

Product-tool

Product-Tool refers to when the paper presents a software tool (e.g., an open-source tool) that can be utilized by the community.

Product-recommendation

Product-Recommendation refers to when the paper offers general recommendations to any of the communities of practice identified above.

Issues Addressed

Issues refer to the primary problem(s) the study aims to address or resolve. A study may respond to multiple issues.

Issues-AppLabel

Issues-AppLabel refers to discussions in the paper addressing the inconsistency between an app's behavior (App) and its privacy label (Label).

Issues-AppPolicy

Issues-AppPolicy refers to discussions in the paper addressing the inconsistency between an app's behavior (App) and its privacy policy (Policy).

Issues-PolicyLabel

Issues-PolicyLabel refers to discussions in the paper addressing the inconsistency between an app's privacy policy (Policy) and its privacy label (Label).

Issues-Crossplatform

Issues-CrossPlatform refers to when the paper compares privacy labels across different platforms, such as iOS and Android.

Issues-Labelselect

Issues-LabelSelect refers to discussions in the paper about the challenges involved in selecting the appropriate privacy labels.

Issues-Labelupdate

Issues-LabelUpdate refers to discussions in the paper about the challenges or considerations related to updating privacy labels.

Issues-Effectiveness

Issues-Effectiveness refers to when the paper examines the effectiveness of privacy communication methods, such as privacy labels, or discusses solutions for improving the effectiveness of privacy communication.

Issues-alternative

Issues-Alternative refers to discussions where the paper proposes alternative designs—beyond privacy labels—for communicating privacy information, focusing on different approaches for presentation or generation.

Issues-compliance

Issues-Compliance refers to discussions about: 1) whether developers are meeting the requirements for providing privacy labels for their apps, or 2) whether existing privacy labels align with privacy laws, such as GDPR.

Third-party

Third-party refers to whether the paper examines third-party tracking issues, including both libraries and cookies, in the context of privacy labels.