

A Multi-Perspective Transparency and Privacy Enhancing Framework for Smartphone Apps

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Abstract The lack of transparency in smartphone ecosystems prevents users from being able to compare apps in terms of privacy and from making informed privacy decisions. Therefore, in this talk, we discuss our efforts in tackling transparency enhancement and privacy challenges corresponding to smartphone apps through a multi-perspective transparency and privacy enhancing framework. The targeted challenges mainly pertain to the unavailability of efficient ex-ante and ex-post transparency enhancing tools for smartphone users aiming at supporting them for making informed privacy decisions. As the main producer of smartphone apps, we also pay a special attention to app developers as another piece of this puzzle that plays an important role in the overall transparency improvements and privacy protection. We shed light on smartphone apps' privacy and transparency at different phases by:

1. assisting smartphone users' decision-making process *before* app installation through proposing an ex-ante transparency enhancing tool;
2. assisting smartphone users' decision-making process *after* app installation through proposing an ex-post transparency enhancing tool; and
3. providing supportive guidelines for app developers to potentially increase their privacy awareness aiming at designing and producing privacy and security friendly apps.

Keywords: smartphone ecosystems; transparency; privacy; permission; users; developers