

User-Centric Permissions for Mobile Devices

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Making security usable

Current problems:


1. Unnecessary interactions *habituate* users
2. Users are asked to make decisions they are unqualified to make



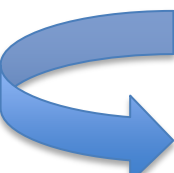
Suggestions for Mobile Permissions



Many were habituated—too many requests
Only prompt when necessary



Many were unaware—too late in the process
Provide information earlier



Understanding requires knowing *all* permissions
Narrow list of possible permissions



THERE CAN BE ONLY ONE?

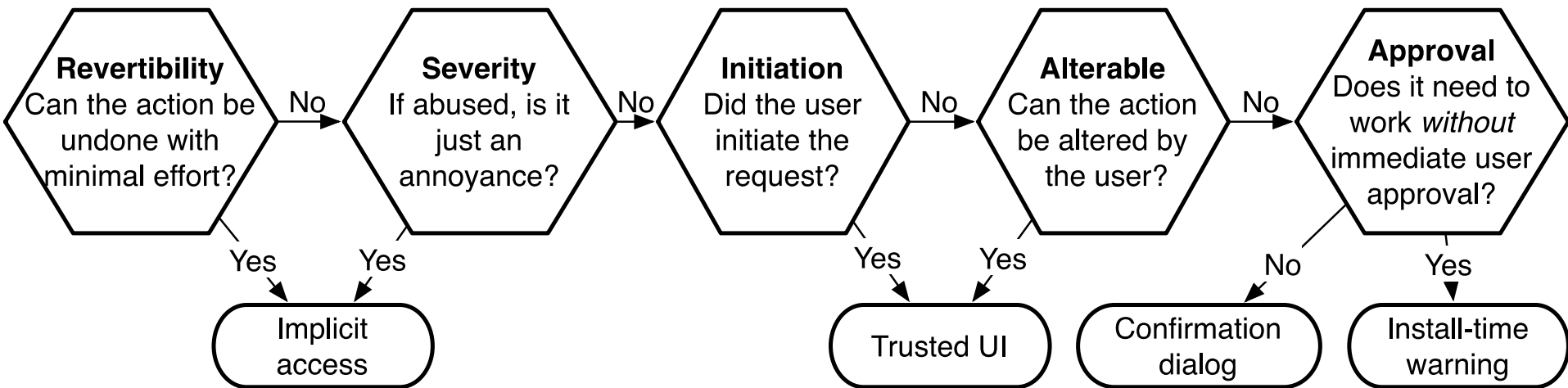
Permission-granting mechanisms

What are the pros/cons of the various ways of asking for permission?

Previous study looked at install-time warnings, what about other mechanisms?

(Applicable to more than just on smartphones.)

Flowchart



Impact on status quo

Of the 83 permissions...

Implicit access	Trusted UI	Runtime	Install-time
55%	23%	16%	6%

Potential to dramatically reduce unnecessary interactions!

Caveat: this does *not* reflect frequency of use.

Future Work

Human subjects experiments to...

- ...improve warnings, when they're needed

- ...create better audit/notification mechanisms

- ...validate the system