

PassSec+ - An add-on that protects your passwords, payment data and privacy

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Motivation

- Entering sensitive data on websites is a risk for security and privacy
- To mitigate the risk users are supposed to e.g. check ...
 - ... the website URL and in particular the (top-level) domain
 - ... whether HTTPS is used
- Web Browser provides ...
 - ... only passive indicators and these are not located where users' focus is when entering sensitive data
 - ... no information where the sensitive data is sent to

Solution PassSec+

- Active security interventions when users are about to enter sensitive data into input fields not classified as low risk ([Fig. 1] and [Fig. 2])
- Info about the risk for each input field
- Recommendation what to check for and how to continue
- Users need to check website only once

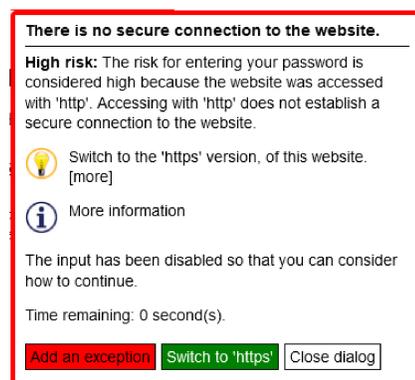


Fig. 1

Future work

- User studies to evaluate the usability of PassSec+ and in particular its effectiveness
 - Eye tracking for observing behavior with and without PassSec+
 - Field study similar to [1]
- Improve PassSec+ against tampering and spoofing of indicators by the website

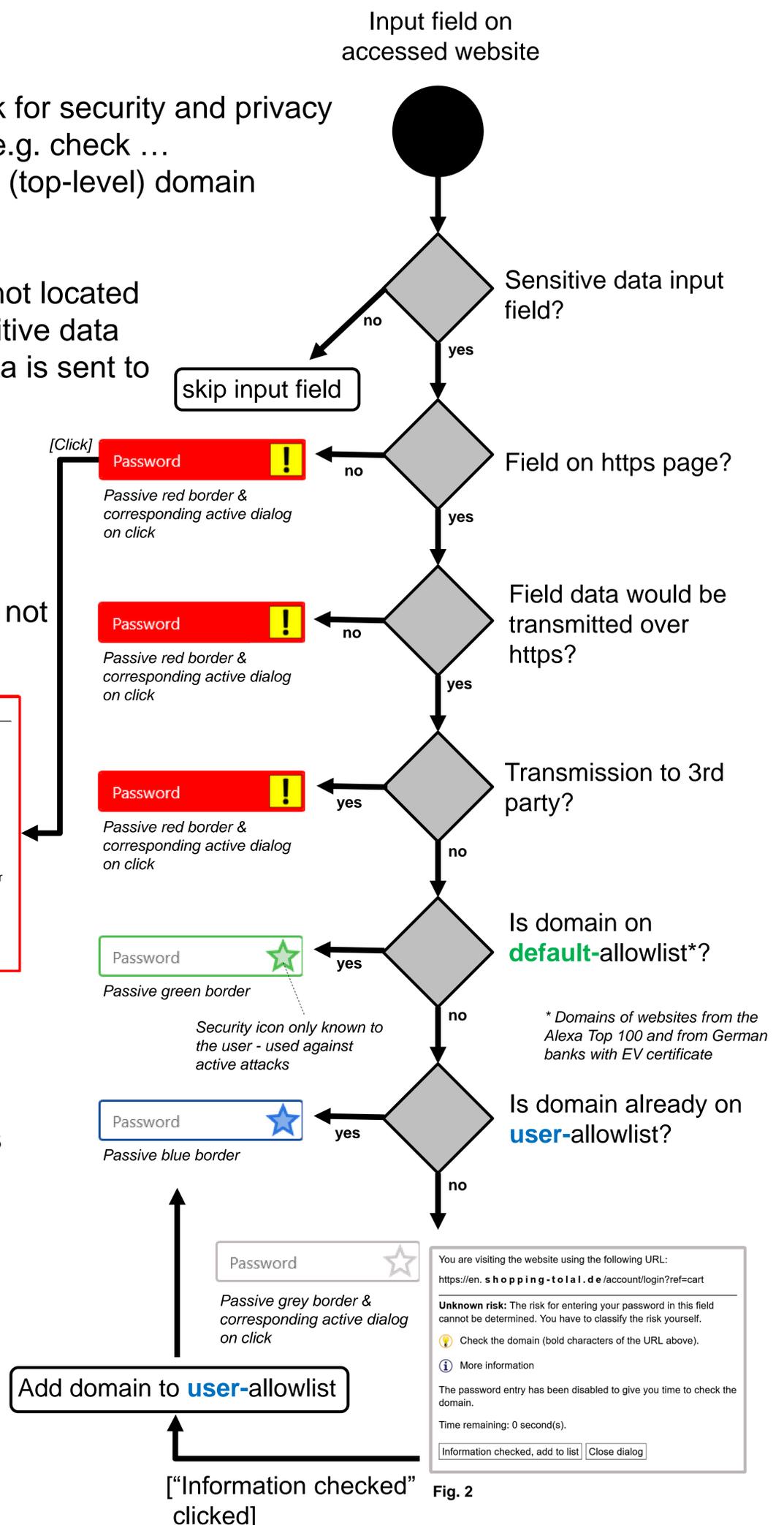


Fig. 2



PassSec+

[1] Volkamer, M., Renaud, K., Canova, G., Reinheimer, B., & Braun, K. (2015, August). Design and field evaluation of PassSec: raising and sustaining web surfer risk awareness. In International Conference on Trust and Trustworthy Computing (pp. 104-122). Springer, Cham.