



Motivation

We aim to engage users' non-visual senses to encourage security awareness and warning adherence.

Objectives



Improve users' *confidence* and ease in assessing the security of websites



Encourage users to have *longer* and *more thoughtful* assessments

NoViz-Thermal

NoViz-Thermal is a notification system that can augment or replace traditional security warnings.

Our Firefox extension collects security data through the webRequest API. This data is sent to our Arduino board which warms a heating pad on a computer causing users to feel heat while browsing insecure websites.



Initial Assessment

Pilot study: One participant completed the SA-6 security attitudes questionnaire. Then, assessed the security of 6 websites presented in random order on a laptop equipped with the thermal notification system.

Expert evaluation: The lead researcher visited 6 websites and walked through the process of assessing website security with the thermal notification system.

Future Work

- Continue prototyping to resolve residual heat issues
- More usability testing to clarify relationship between temperature + warnings
- Explore other types of non-visual security warnings

TLS Certificate	Max Temp.
None	30°C / 86°F
Domain Validated (DV)	25°C / 77°F
Extended Validated (EV)	20°C / 68°F

