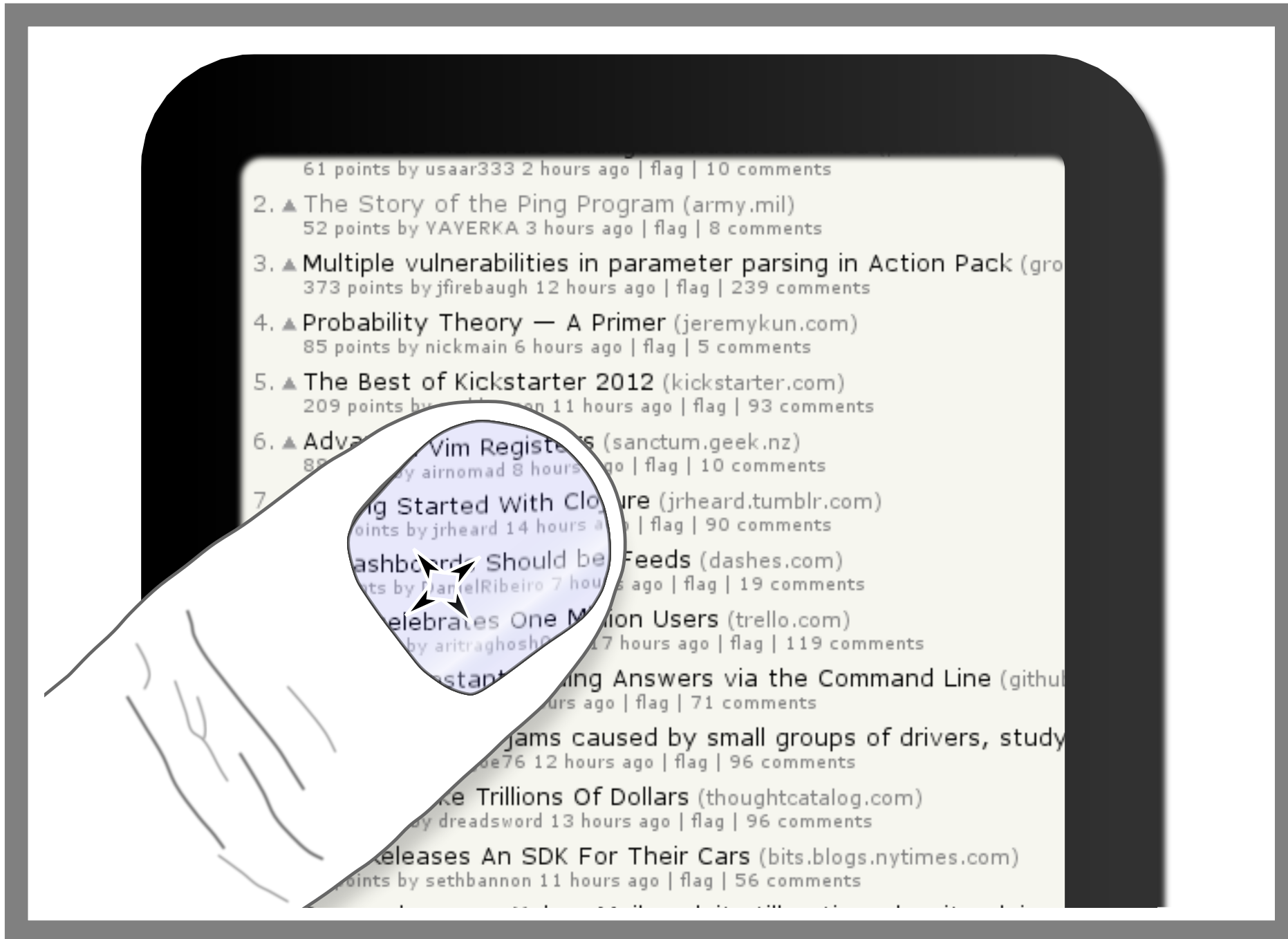


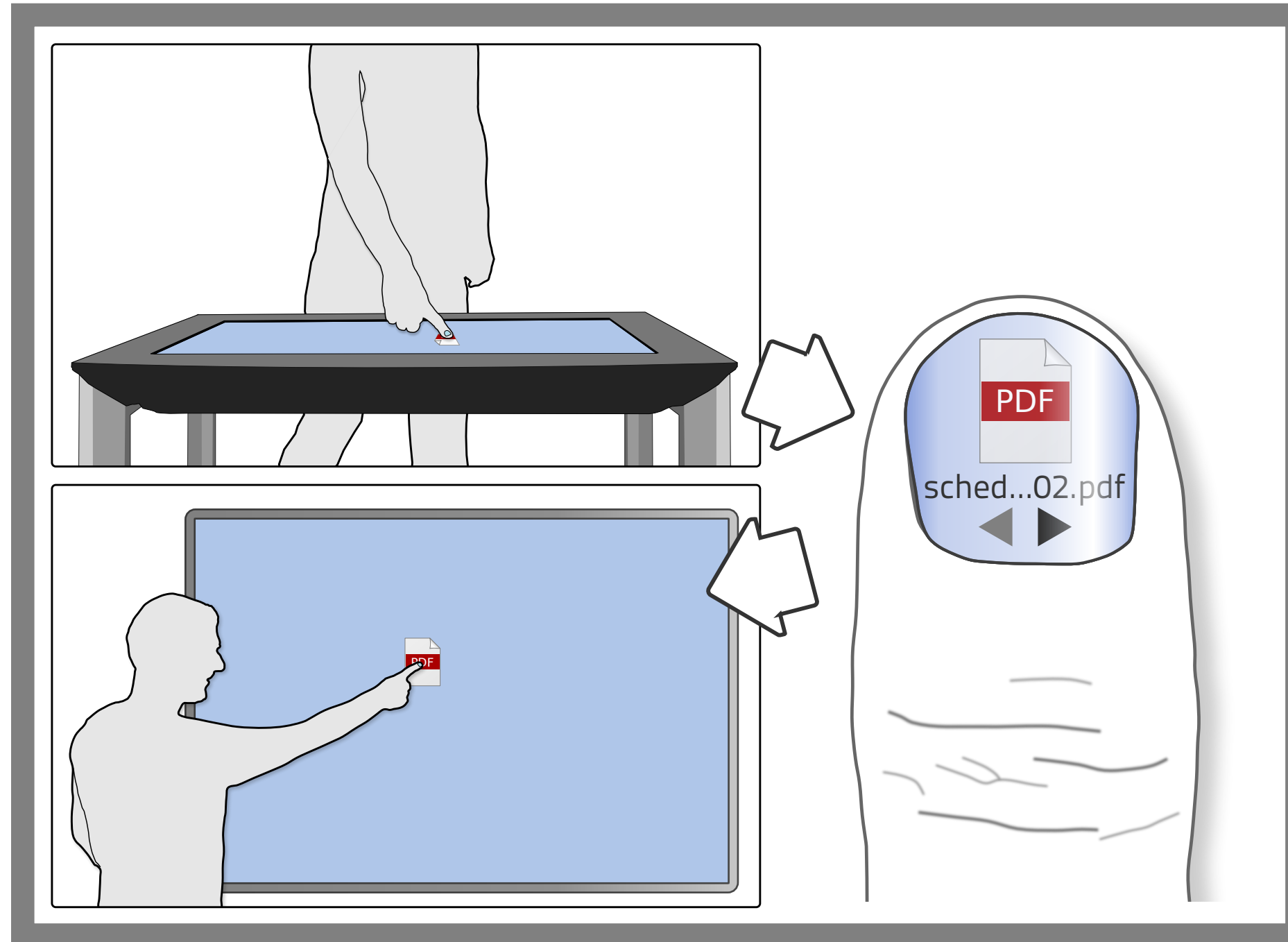
Fingernail Displays: Input and Output at Your Fingertips

Small displays mounted on top of the fingernails
turn them into always-available palettes, clipboards, magic lenses.

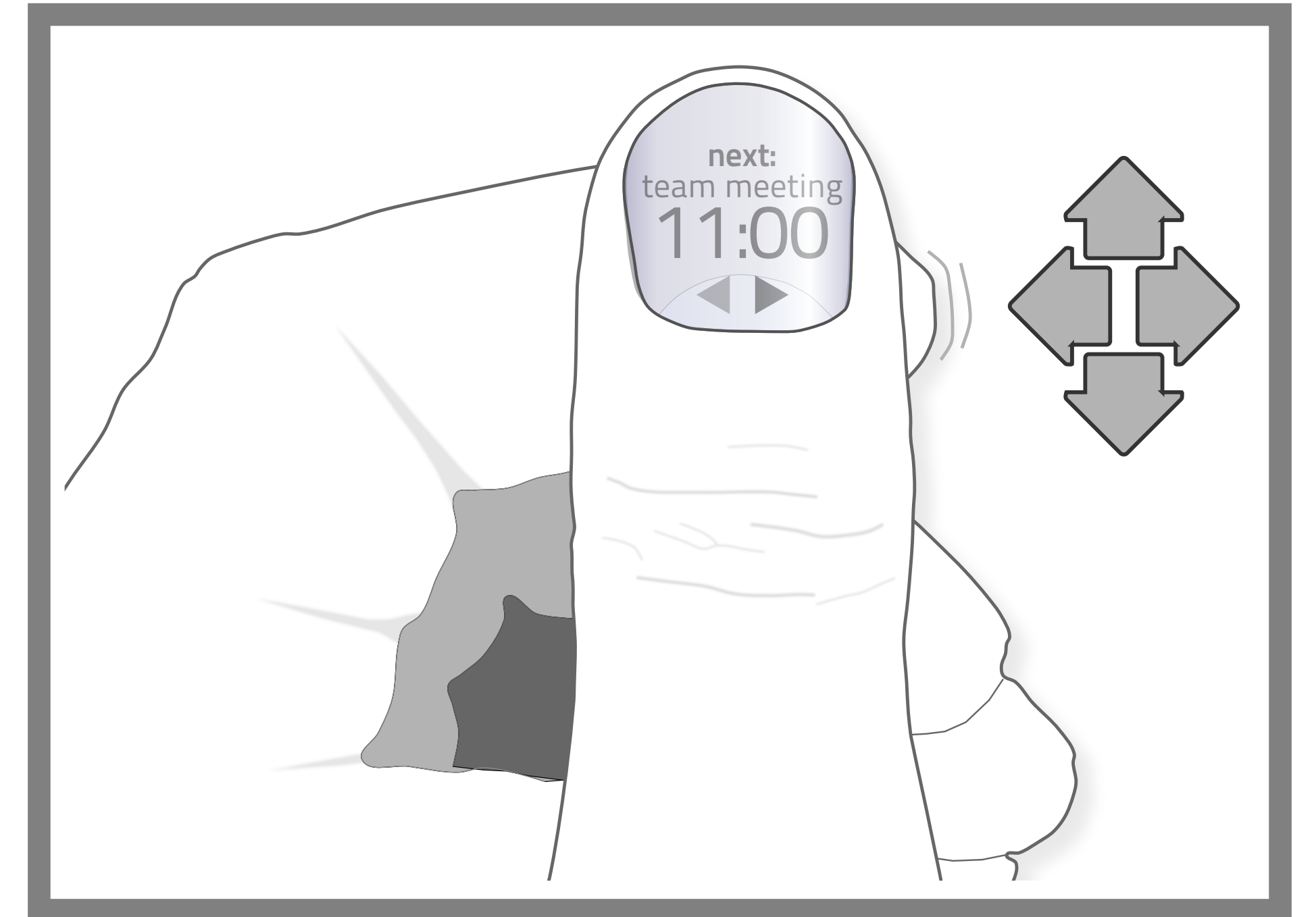
Applications



Turn finger into a magic lens,
mitigating the fat finger problem.



Use as a pervasive clipboard or
palette for touch interaction



Use as an always available input
device

Research Questions

Can fingernail displays mitigate the fat finger effect?
Would a see-through fingernail help or hinder users?

Which fingers are most suited for augmentation?
Should fingernail displays be considered public or private?

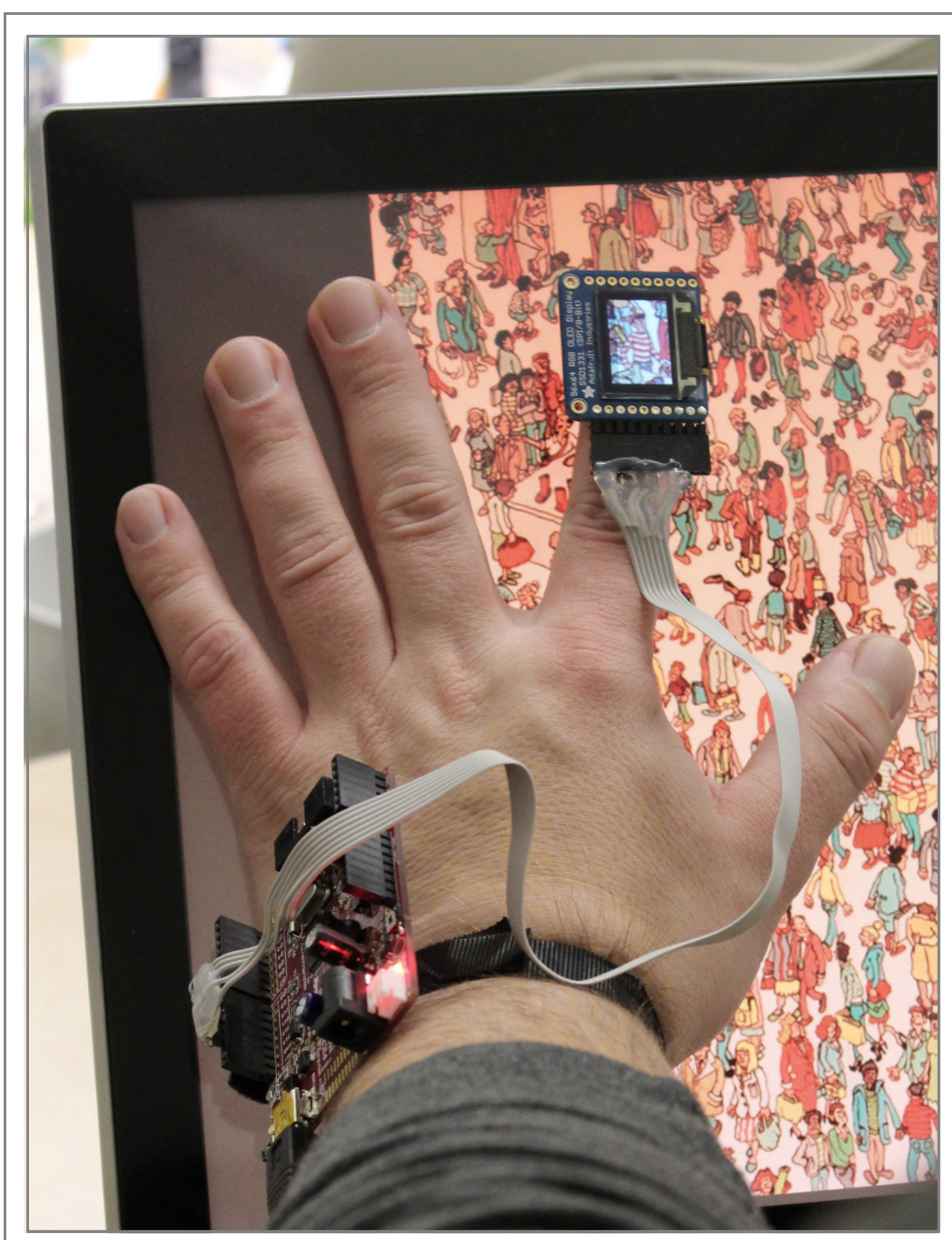
How can we implement and power fingernail displays?
How can data and power be transmitted wirelessly?

What is necessary for users to like and wear fingernail displays?
When are fingernail displays annoying or hindering?

What are useful metaphors and gestures for fingernail displays?
Can the fingernail serve as a miniature clipboard?

Which technologies work best for implementing fingernail displays?
E-Paper, OLED, ...?

Status and Future Work



Current Status:

We have created a working prototype based on a 1-inch 96x64 px OLED display (121 DPI) connected to a host PC with capacitive touchscreen via a wrist-worn Pinguino board. Although this prototype is still too large for everyday use, we will use it for exploratory user studies and develop improved variants in parallel.

Future Work

The next steps in our research will be to develop a sensor-equipped prototype and to explore and study potential interaction methods.

We would like to hear about your thoughts on this project. You can also learn more about this ongoing research project at <https://wiki.mi.ur.de/fingernail>