LIMITATIONS

Novelty: We conducted a field study over one to three weeks. Our participants' views might be biased due to the novelty of our concept. A longer study could investigate usage and the users' views, when the concept's novelty wears off.

Privacy: Users might not want to share personal fonts with strangers or public audiences. We propose to only enable personal fonts with user-selected partners (i.e. a friends list). For other recipients, the text can be rendered in a normal font.

Legibility: Some participants said that they tried to type carefully, or that they re-entered text to avoid too strong adaptations (e.g. due to sudden movements, like typing while standing up, P_{11}). To improve legibility, we suggest to consider limiting adaptation strengths per character, word or sentence.

Speed: P_9 felt slower due to checking legibility. Others felt not slower than usual (P_8), or valued typing carefully as a positive training effect (P_5). No one reported speed as problematic. Nevertheless, a lab study could quantitatively compare speed with and without font adaptations.

CONCLUSIONS AND FUTURE WORK

Typing is a common and important task on mobile devices. Research has often addressed aspects of efficiency, like speed and error rates. In contrast, this paper focussed on expressiveness: We presented *TapScript*, a dynamic font personalisation framework, which adapts the visual appearance of characters based on the typist's behaviour and context at each keystroke.

In contrast to current meta-information in texting (e.g. CAPS, context hints: message sent from device/place), our concept enables subtle indications of personal behaviour and context directly via the font itself. Hence, *TapScript* provides and explores new possibilities for expressive mobile text entry.

An online survey revealed that resulting fonts are distinguishable between users and basic contexts. A field study with a chat app showed positive feedback on personalisation and expressiveness for casual communication. In contrast to on-screen writing, *TapScript* retains the benefits of keyboards (e.g. one-handed use, word suggestion/correction, no stylus). To conclude, we highlight insights which inform further work on personalised, context-adaptive mobile text entry:

- Fonts with letters drawn with a finger on the screen convey individual, identifiable characteristics, similar to writing.
- The handwritten look is perceived as casual and personal, but potentially less legible than usual fonts.
- Adaptation possibilities elicit creative usages in chats.
- Implicit adaptations need to stay understandable, and consistently subtle or adjustable: users like to feel in control.
- Control over adaptations should consider several levels: in general, in specific situations, and for specific recipients.

Based on our insights, we plan to improve concept and app for a larger, long-term deployment. Control over adaptations can be improved with parameter pre-sets, for example presented as virtual pens. We will also investigate further context influences as well as adaptations based on temporal models [12].

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