

Promoting the Awareness of Tailoring Tasks through Subtle Visual Cues

Team(s) Loki (Centre Inria de l'Université de Lille & CRISTAL)

Level Master

Duration 4-6 months

Advisor(s) Bruno Fruchard [**Contact advisor(s)**]

This internship investigates means to promote the awareness of tailoring actions to modify an interface layout with the goal to reduce clutter and expose task-specific commands.

Context

Command layouts used by generic applications are designed to accommodate a majority of users for stereotypical tasks. Users thus face interfaces crowded with commands that may not apply to their specific tasks. Applications like Affinity Designer or the Adobe Suite (e.g., Illustrator, Photoshop) enable changing their layout by moving panels around and modifying toolbars, but very little information indicate such actions exist.

We will investigate visual cues to promote the use of tailoring actions and study whether they have an impact on users when modifying interface layouts. For instance, we will study whether making rarely-used commands disappear from interfaces induce actions from users and when (Figure 1) [1]. We will particularly focus on the distracting effect of such cues and try to quantify the impact of self-changing interfaces vs. change-inducing interfaces (the latter requiring users to take actions).

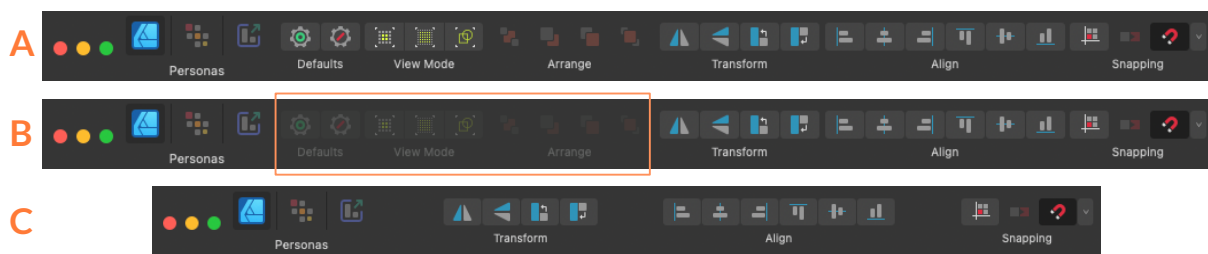


Figure 1: (A) A toolbar used in Affinity Designer 2. (B) Commands that are rarely used start disappearing from the interface, to the point (C) they are removed (automatically or by end-users) from the toolbar and the layout adapts to less commands

Objectives

Our goals are to identify visual signifiers indicating that tailoring actions are possible to change an interface layout. We will study various means (e.g., animations) using a prototype interactive system in a user study to investigate users reactions to them.

The candidate will:

1. identify a list of potential visual signifiers inducing changes to an interface layout to tailor it to tasks' specificities
2. build an interactive system (or modify an existing application with extensions or add-ons, e.g., Blender or Figma) supporting conventional simple tasks (e.g., text editing) to integrate these signifiers and run a few controlled tasks

3. run a user study evaluating the impact of the signifiers on the tailoring actions performed by participants, their level of distraction, and their impact on the overall task performance (mostly task completion)

Candidate

The candidate must be at the MSc (Master 2 in France) level and show interest in Human-Computer Interaction and demonstrate knowledge in Interaction Design, and Computer Science (particularly programming). Previous experience in designing interaction techniques and programming interactive software are a plus.

If you are interested, please send an email to Bruno Fruchard (bruno.fruchard@inria.fr) using as a subject [LOKI internship: Promoting the Awareness of Tailoring Tasks through Subtle Visual Cues].

References

- [1] L. Findlater, K. Moffatt, J. McGrenere, and J. Dawson. Ephemeral adaptation: the use of gradual onset to improve menu selection performance. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, CHI '09*, pages 1655–1664, Boston, MA, USA. Association for Computing Machinery, 2009. DOI: [10.1145/1518701.1518956](https://doi.org/10.1145/1518701.1518956).