

Designing and Evaluating PresActive, a Hand-Gesture Controlled Software Application for Creating Slide-Based Presentations

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Touchless interaction is becoming increasingly popular across many industries. To investigate how using this technology influences the design, usability, and user acceptance of productivity software, an application for creating PowerPoint presentations with mid-air gestures was created and evaluated in this project.



To find a set of technically **usable and well-accepted gestures**, a literature review was performed and appropriate gestures were preselected. Afterwards, a study was conducted in which the application's features were mapped to these gestures.



The application features a **user interface** that is **optimised for touchless interaction** and uses a **circular swipe context menu** to provide swift access to all features.

In a usability study, the dwell-click approach used to invoke this menu was criticised as being too ineffective to be usable. This issue is well-known in the field of touchless interaction.

However, in general, the study showed that PresActive has a **high overall usability rating and a high user acceptance** — most of the participants said using it was **'fun' despite experiencing tired arms** after a certain time (gorilla-arm syndrome).



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Computing
MSc Projects 2017

