Design Report - Concept

DECO7230 - Digital Prototyping and Extended Reality

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Chosen Application

Microsoft PowerPoint is a popular presentation tool for making slideshows, graphic reports, and interactive educational materials. Although, PowerPoint is typically 2D and screen-based, it can be enhanced more immersive, interesting and collaborative by incorporating XR (Extended Reality) interaction design principles. By making the presentation process more immersive, this could help with remote teamwork, business presentations and education.

Three User Tasks and Goals in the XR.

- Task 1: Creating and arranging the slides in the XR workspace.

The objective is to enable users to organize slides on a floating virtual wall while utilizing hand gestures to physically move, resize and rearrange presentations. Interaction: Simple dragging, pinching and positioning slides is comparable to handling objects like in real life.

- Task 2: Work together in real-time with others in XR

The goal here is several people can join the same XR environment to brainstorm visually, co-edit presentations, and contribute notes. Interaction: Live sticky notes on 3D slides, or shared whiteboard tools will be added as interactive elements.

- Task 3: Immersive presentation in storytelling mode

The objective is to give presentations in which the user is surrounded by slides that have embedded videos, 3D models etc. Interaction: The presenter can zoom in on slide details, switches between slides, and initiates animations with hand movements when necessary.

Development of the initial idea: Initial version of PowerPoint displaying slides on a virtual screen. As the feedback indicated it felt flat, it was improved by including

interactive charts, floating slides and co-creation area. Early prototyping used paper cutouts to test slide manipulation and presentation flow.

XR Concept: Users interact with – ***Hand-tracking gestures like pinch to grab a slide, swipe to change slide, and adding sticky notes to interact. The slides will be placed around the room and 3D models included in slides for immersive explanations.***

Initial testing plan:

The specific interactions and features to test to validate the part of the concepts: Testing hand motions for exploring 3D information, adding and rearranging slides and real-time collaboration.

Assumptions about the way the concept would work: 3D media organic gestures and spatial slide organization improve usability and engagement.

Data to validate or invalidate the assumptions: Measuring task completion time, team ratings, and user input on learning curve and comfort.