Extended Reality Video Workspace

Testing plan for interactive prototype 1

This project reimagines Adobe Premiere Pro, a professional video editing software, by bringing its core editing functions into XR. Instead of flat timelines, video clips are arranged in a 3D floating space where editors can interact using hand gestures to play, trim, and organize sequences. By leveraging XR's immersive environment, the workflow becomes more spatial, intuitive, and engaging than traditional desktop editing.

Testing Objective

From my above concept, I have identified that the intuitiveness and usability of arranging and trimming floating video clips in 3D space is an unvalidated aspect that needs testing. This test aims to discover whether users can easily understand and perform spatial interactions such as pointing, dragging, trimming, and snapping clips together without extensive instructions. The findings will let me evaluate if the proposed XR interactions truly enhance editing workflows compared to traditional 2D interfaces.

Testing Methodologies

This testing plan will use **task-based usability testing** to evaluate a digital prototype made in Unity.

Prototype Description/Requirements

The prototype was designed to provide interactivity that allows me to test how users arrange and trim spatial video clips in XR. It includes floating video panels in 3D space that can be enlarged when pointed at, trimmed by interacting with corners, and dragged into a curved semicircle sequence view. The prototype visually represents video clips as floating panels with affordances (glowing borders, drag cues, and play buttons) to guide user interaction.

Data Collection Method

During the testing process, I will be asking users to complete specific tasks (e.g., play a video, trim it, snap two clips together, arrange clips in sequence) while thinking aloud. I will observe their behavior, record task completion rates, errors, and collect qualitative feedback on ease of use and intuitiveness. I will also note moments of hesitation or confusion to identify design issues.

Testing Setup

The test will be run using a VR headset connected to Unity with the prototype loaded. Participants will be provided with a short briefing on the purpose of the study and basic

XR controls. I will prepare a quiet testing space, ensure the headset is calibrated, and set up screen recording to capture both the user's actions and their spoken feedback.

Testing Process (Schedule/Time)

- **Introduction & consent** (30 seconds) – Greet participant, explain the test purpose, and confirm consent.
- **Prototype explanation** (1 min) – Provide a short overview of the XR environment and interaction controls.
- **Task execution** (5–7 mins) – Participants attempt the assigned tasks (play video, trim video, drag & arrange clips, snap clips together).
- **Feedback session** (2–3 mins) – Ask participants about their experience, challenges, and suggestions.
- **Wrap-up** (30 seconds) – Thank them for participation and end the session.