Appendix

Raw Data

- Detailed technical specifications, performance data and granular view of the hardware and software components used in the AR glasses.

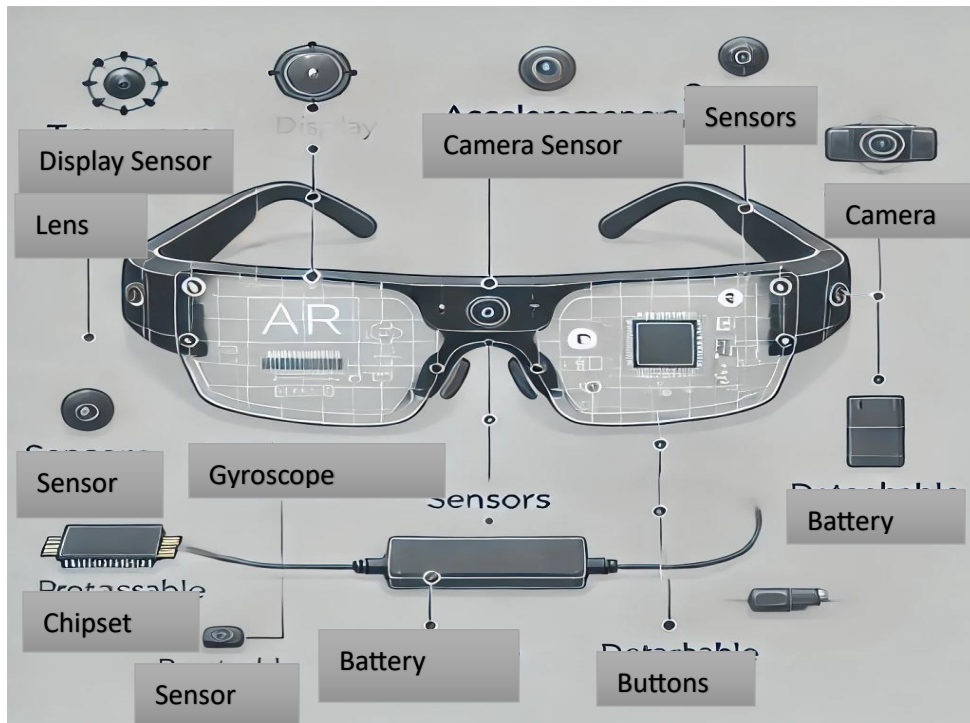| Component	Feature	Performance
Display	Transparent lens	2K resolution per eye
Battery	Detachable, rechargeable	6-8 hours of usage
Sensors	Accelerometers, gyroscopes, cameras	Head and gesture tracking
Connectivity	Wi-Fi, Bluetooth, NFC, Airdrop	Seamless data exchange
Processing Unit	Integrated processor	Efficient data rendering
Operating System	Custom OS	Manages AR applications

Survey

Interview Questions Survey

- What tools do you currently use for visualizing your designs?
- Have you ever used AR or VR in your design work?
- What challenges do you face when presenting designs to clients?
- What features would you like to see in AR glasses for architecture?
- How important is it for AR glasses to work with the software you already use?

User Experience Questions Survey

- How easy do you find it to use new technology in your work?
- How helpful would AR glasses be in visualizing designs in real-world spaces?
- How useful would immersive 3D walkthroughs be during the design process?
- How would showing AR designs to clients improve your presentations?
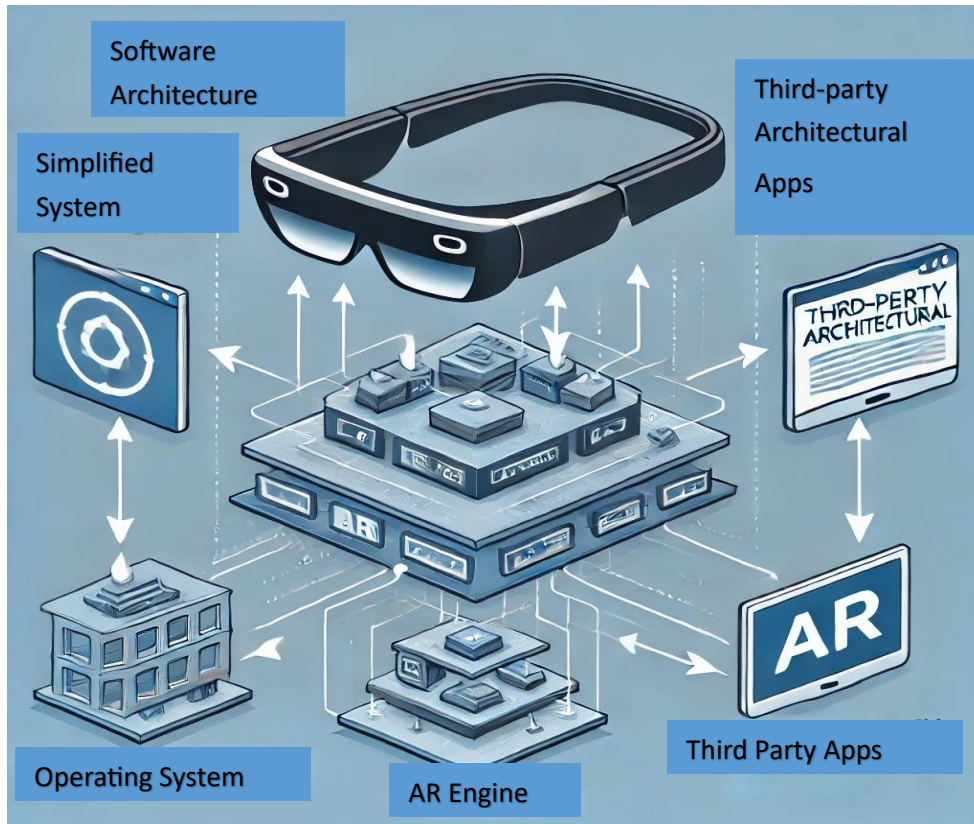- How important is comfort when using AR glasses for long periods?

Figures and Diagrams

Visual representations of the AR glasses' hardware and software architecture.

Figure 1: AR Glasses Hardware Overview
This figure illustrates the layout of key hardware components, including the display, sensors, battery, and processing unit.

Figure 2: Software Architecture
Description: This diagram outlines the interaction between the custom operating system, AR engine, and third-party architectural applications.

Technical Details

Latency Optimization:

- **Objective**: Ensure latency remains under 0.5 seconds to maintain seamless user interaction.
- **Method**: A latency test simulation was conducted with [Tool X], adjusting data processing and sensor input frequencies to minimize delay.

Battery Life Calculation:

- **Objective**: Provide a battery life of 6-8 hours.
- **Method**: Battery performance tests were run using average power consumption rates for the display, sensors, and processing unit, under standard usage scenarios (including real-time rendering and data transmission).

Legal Documents/ Reference

O'Hare, J., Dekoninck, E., Mombeshora, M., Martens, P., Becattini, N., & Boujut, J. (2018). Defining requirements for an Augmented Reality system to overcome the challenges of creating and using design representations in co-design sessions. *CoDesign*, *16*(2), 111–134. https://doi.org/10.1080/15710882.2018.1546319

Augmented Reality Functional Requirements - AREA. (2018, April 27). AREA. https://thearea.org/area-resources/augmented-reality-functional-requirements