

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202511061317 A

(19) INDIA

(22) Date of filing of Application :26/06/2025

(43) Publication Date : 11/07/2025

(54) Title of the invention : AN IMPROVED AUGMENTED REALITY HEADSET WITH REDUCED LATENCY AND POWER OPTIMIZATION

(51) International classification	:G06F0003010000, G02B0027010000, G02B0027000000, G06V0040190000, G06T0019000000
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

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(57) Abstract :

The present invention discloses an improved augmented reality headset (100) featuring a dual-processor architecture (104, 106), dynamic foveated rendering module (108a), and an adaptive power management system (110) to significantly reduce latency and optimize power usage. Integrated eye-tracking sensors (112) enable real-time gaze detection for efficient rendering, while a thermal regulation unit (114) maintains operational temperature through phase-change materials and micro-fans. The headset (100) delivers enhanced user experience, prolonged battery life, and responsive interaction for extended AR applications across diverse environments.

No. of Pages : 14 No. of Claims : 5