

Apple's augmented reality roadmap

Apple could release an augmented reality (AR) and virtual reality (VR) combination headset in 2022, followed a year later by sleeker AR glasses

INDUSTRY CHATTER

► **Aug 2018:** Apple purchases **Akonia Holographics**, maker of AR lenses

► **Dec:** Hires former **Microsoft HoloLens*** designer **Andrew Kim**

► **Feb 2019:** iPhone executive **Frank Casanova** named first **Head of AR Marketing**

► **Mar:** Report claims Apple plans to launch AR glasses as iPhone accessory

► **Apr:** Apple hires **Jaunt VR** founder **Arthur van Hoff**

► **Sep:** Hacked **iOS 13** code suggests Apple is testing AR headset, codenamed **Garta**

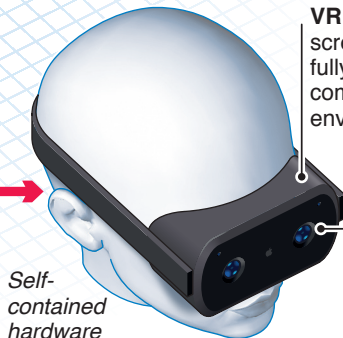
► **Nov:** Apple enters into partnership with **Valve**, video game developer and maker of **Index** VR headset

► **2020:** New **iPad Pro** and **iPhone** models to feature AR 3D scanners

► **2022:** Apple to release hybrid AR-VR headset – focusing on games, videos and virtual meetings

► **2023:** Sleeker Apple AR glasses to arrive

AR-VR HEADSET – 2022

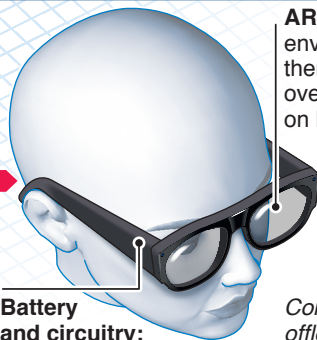


Self-contained hardware

VR: Stereoscopic screens show fully immersive computer-generated environments

AR: External cameras show real life surroundings, and computer superimposes graphics over them

AR GLASSES – 2023

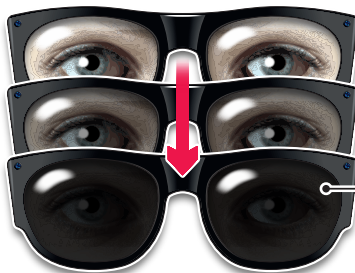


Battery and circuitry:
Within stems and frame

AR: Users see real environment around them with graphic overlays displayed on lenses

Both devices use 3D sensor system – advanced version of Face ID

Computing tasks offloaded to paired iPhone



Lenses darken when in operation, to signal to observers that user is otherwise occupied