

The Reality Spectrum

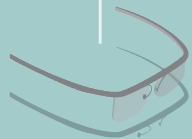
Eric Abbruzzese
Principal Analyst

May 4, 2017

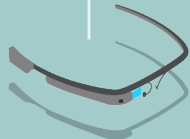
ABI Research

Augmented Reality & Virtual Reality

REALITY SPECTRUM



Reality



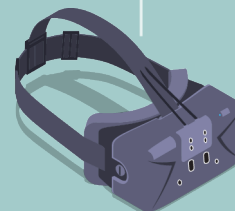
Augmented Reality

- Translucent Display
- Passive Content



Mixed Reality

- Translucent Display
- Active Content
- Georegistration



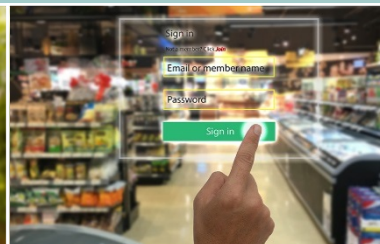
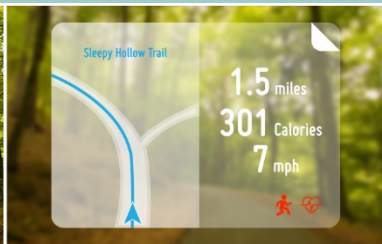
Merged Reality

- Occlusion
- Camera Pass-through
- Georegistration



Virtual Reality

- Occlusion
- Fully Rendered



Simultaneous Generations

1.0 → 2.0 → 3.0



■ Hardware Considerations



2D vs. 3D

Monocular vs. Binocular

Primary Use Cases

Adaptability

Connectivity

Performance
vs. Battery

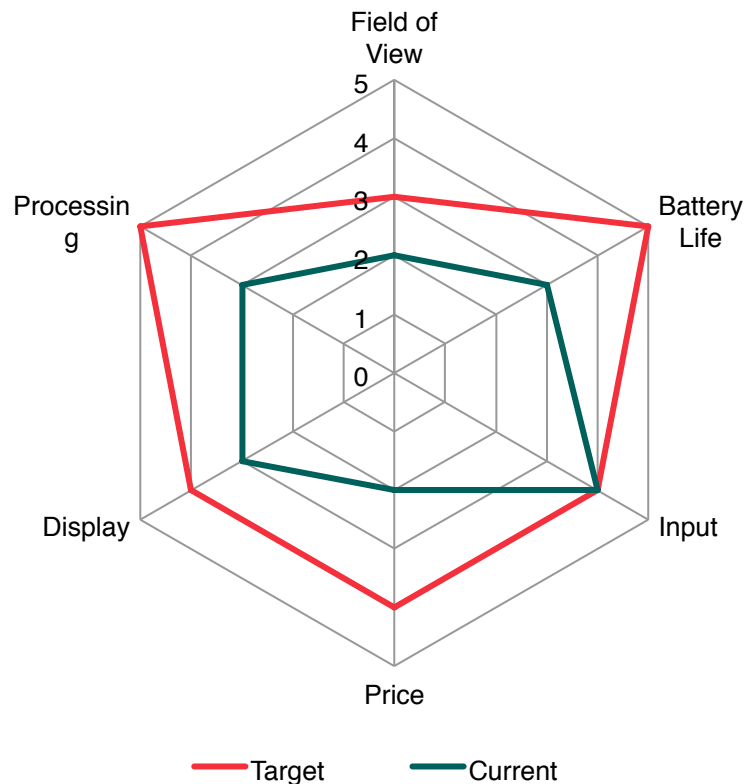
Durability

Price

Comfort



Mixed Reality: State of the Hardware



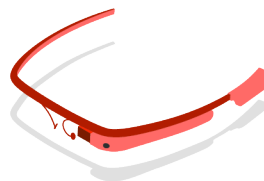
- Field of View is instantly noticeable
- Battery life is acceptable but lacking
- Input is furthest along
 - Voice
 - Gesture
 - Gaze
 - Touch
- Price is objectively high
- Display quality is good, but form factor is not (yet)
- Processing faced with form factor, heat, and battery obstacles

Total Smart Glasses Shipments by Form Factor

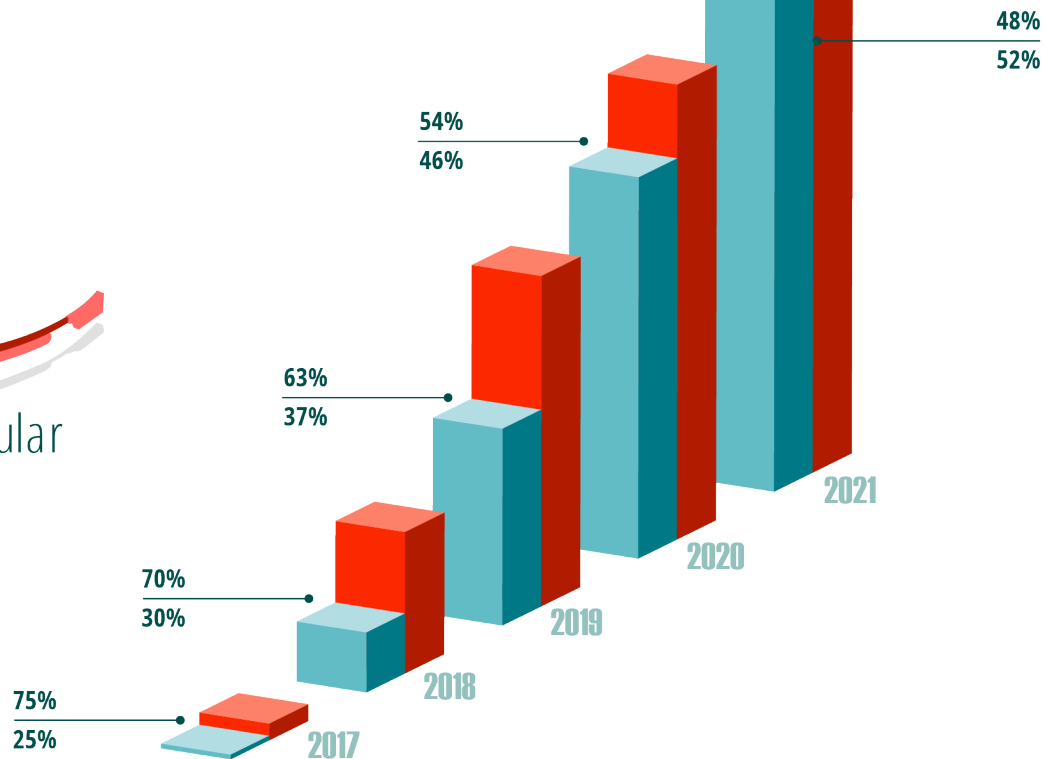
World Markets, Forecast: 2017 to 2021



Binocular



Monocular



Mega Mobile

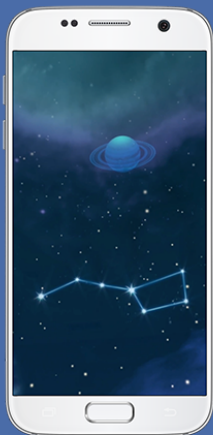
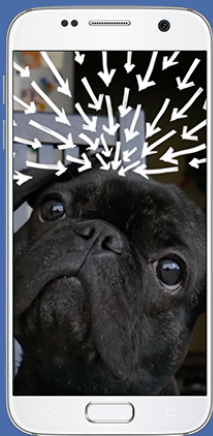
Strong Install Base of Both New and Old

*363 million smartphones with
embedded vision by 2021*



Tango





Thank You

Eric Abbruzzese

Related Research

- Augmented and Virtual Reality Database (MD-ARVR-103)
- Augmented Reality Competitive Assessment (CA-1233)
- Augmented/Mixed Reality SI and VAR Market Tracker (MD-ARSV-101)

Upcoming Research

- Augmented and Mixed Reality Database (June)
- AR Content Creation and Application Marketplaces (June)
- Display Tech (July)
- AR/MR Sensors (September)