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Augmented World Expo

Qualcomm

The Making of an Ambient World: The Future of XR is Now

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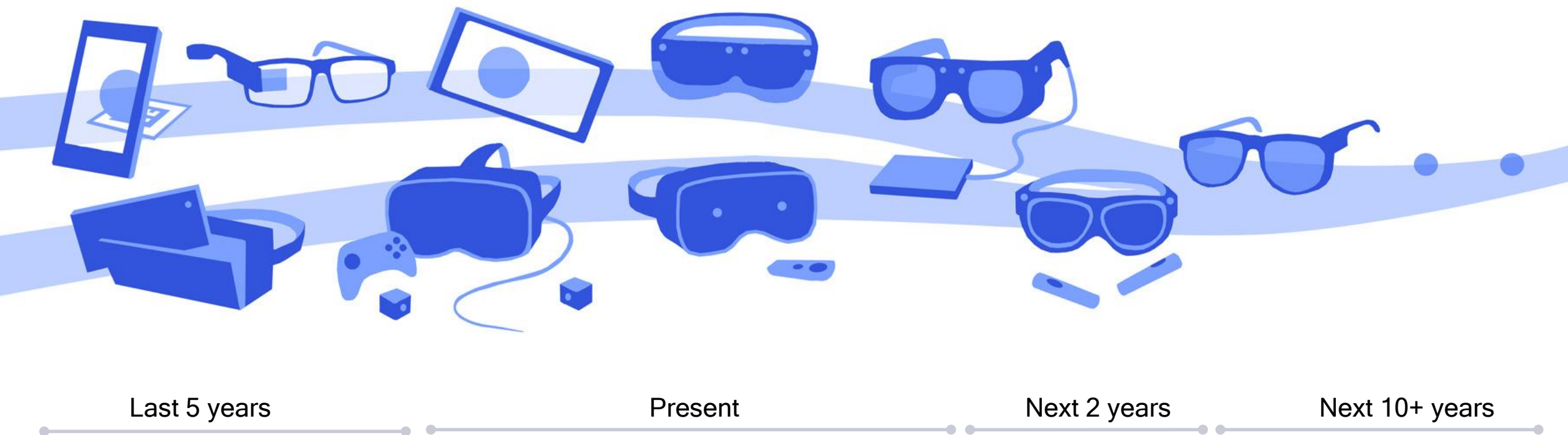


XR is the
next mobile
computing
platform



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The past, the present and the future of XR devices

Past XR use in education



- Target-based
- GPS/Compass mapping



Present XR use in education



- Eye, head and hand tracking
- Inside/out motion tracking (6DoF)
- Low latency connectivity
- 3D audio
- 4K graphics
- AI



Present XR use in education



- Room scale mobile head tracking
- Image and Object Recognition
- Plane Detection
- Immersive 3D Audio
- Scene depth understanding



Future XR use in education



- Whole body tracking
- Object occlusion
- Scene understanding
- Common illumination
- AI
- 5G



Future XR use in education

Ambient computing
No wearable devices

- Natural interaction UI
- AI
- World motion tracking



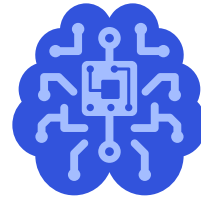
Technology lays the foundation

Convergence of multiple touchpoints



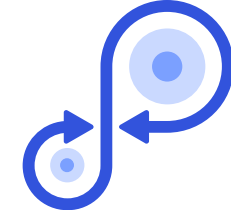
Immersion

- Visuals
- Audio
- Interaction
- 6-DoF VIO
- SLAM
- 3D reconstruction
- Object detection & recognition



Artificial Intelligence

- AI for advanced cognitive processing
- Local and cloud machine learning
- Security and privacy



Connectivity

- Pioneering 5G technologies
- Connectivity convergence

Heterogeneous computing is fundamental
for power-efficient processing of all this

Platform



Software



Advanced Algorithms

Eye tracking

3D Audio

6DoF

Foveated rendering

Hand tracking

Scene Understanding

Ref Design, SDKs & Tools

VR SDK

KPI

Profiles

HMD Accelerator Program (HAP)



ODM

ISV

IHV

Components

Devices



How do we make this happen?

Smartphone VR



Smartphone AR



Standalone VR



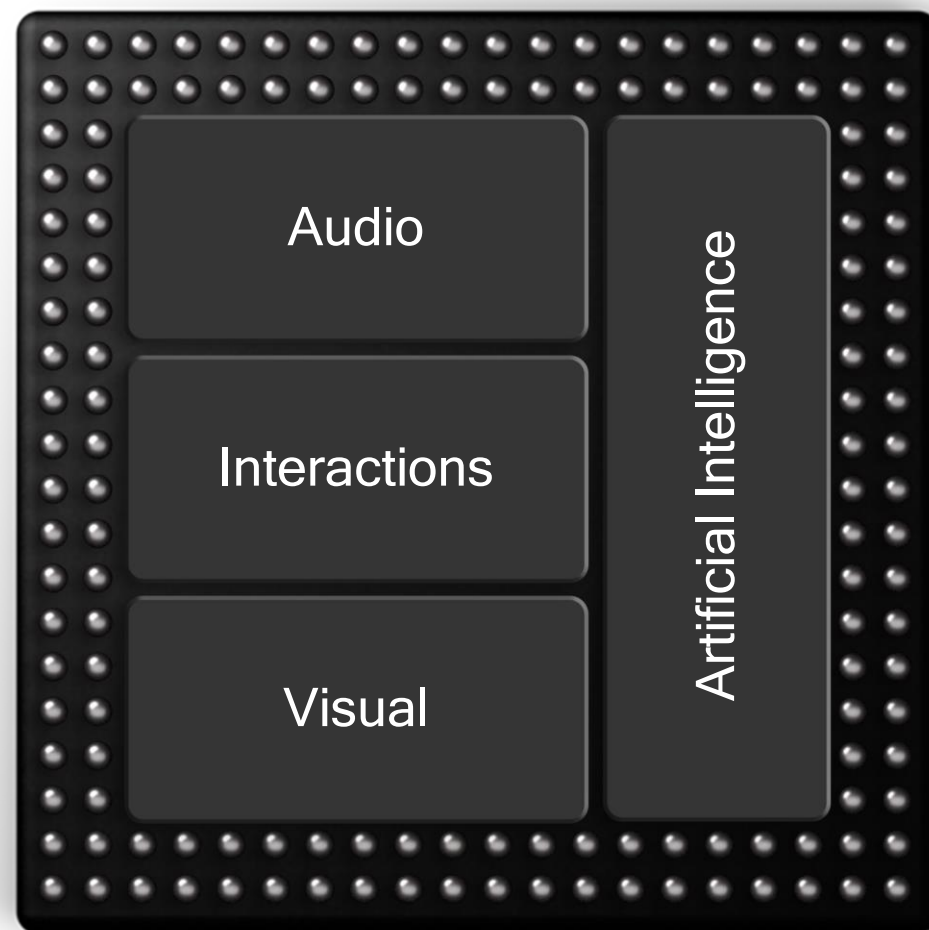
Standalone AR





Introducing the first dedicated XR platform

Designed for XR



High quality XR experiences for mainstream audiences

XR is the next mobile computing platform




Today's technology is laying foundation for tomorrow's world

Call to arms for XR market acceleration: cooperation is key





Thank you!

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