

What is the relationship between Metaverse and XR

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I got some question.



What is Metaverse?

What is XR?

What is VR?

What is AR?

What is MR?

What is the relationship between these?

I got some question.



This **presentation** will answer these questions.

by providing an analysis and supporting evidence based on the relevant research.

Metaverse



- The word first appeared in the fiction Snow Crash [1] in 1994,
- The original Metaverse depicted a **3D virtual world** allowing people to live through avatars.

Metaverse



- the current Metaverse is an **environment**
- containing both **virtual** and **real** elements.

Metaverse



- a virtual world
 - a connection of multiple virtual worlds
 - an augmented physical world
- cite: [2], [3], [4], [3], [5], [6], [7]
- the current Metaverse is an environment containing both virtual and real elements.



The next: XR



How can we actually **see** it ?

Today's solution is to see the metaverse through **XR** technology,
So what is XR?

Extended Reality (XR)



X R



Augmented Reality

AUGMENTED



Mixed Reality

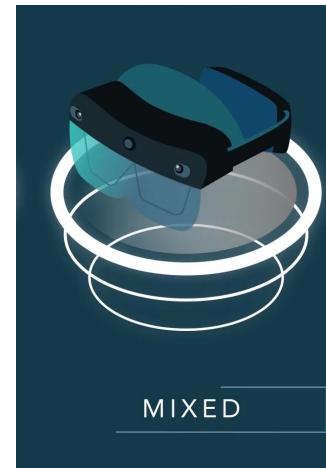
MIXED



Virtual Reality

VIRTUAL

Virtual, Augmented, Mixed Reality



What is the difference?
Augmented Reality Mixed Reality Virtual Reality

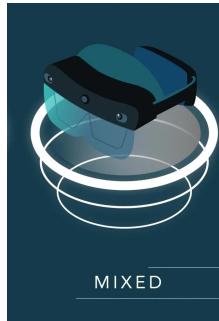
What is the exact meaning

Virtual, Augmented, Mixed Reality



- overlays **computer-generated** information into the **real** world [12], [18], [19], [20]
 - interactivity in AR [21], [22].
- 
- combines the **real** and **virtual** worlds [12], [15], [16].
 - interact
- 
- entirely **virtual** 3D environment [12], [13]
 - allows users to immerse and interact.
- 

Virtual, Augmented, Mixed Reality



- overlays ... real ..

- combines the real and virtual ...

- entirely virtual ...



VIRTUAL

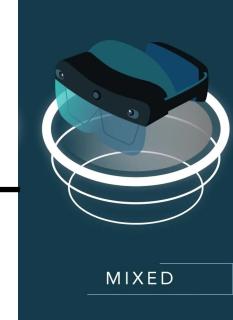
Virtual, Augmented, Mixed Reality



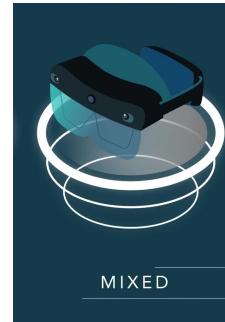
computer-generated

- overlays **virtual... real ..**

- combines the **real** and **virtual** ...



Virtual, Augmented, Mixed Reality



Mixed Reality (MR)

Real
Environment



Augmented
Reality (AR)

Virtual
Environment

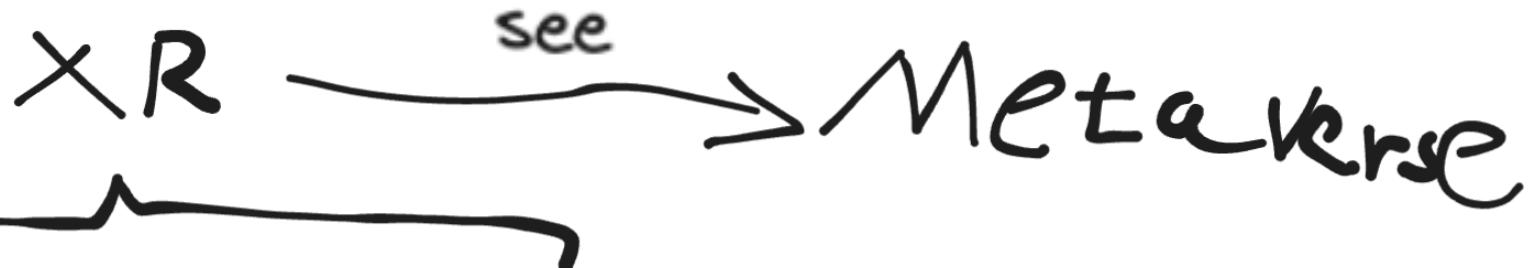


Augmented
Virtuality (AV)

What is the relationship between these?

XR → Metaverse

see



VR MR

MR includes AR.

AR

XR includes VR and MR.

AR

We need XR to enter the Metaverse.

XR is also one of the foundations supporting the Metaverse.

Q&A



Q&A