

Introduction (part 2)

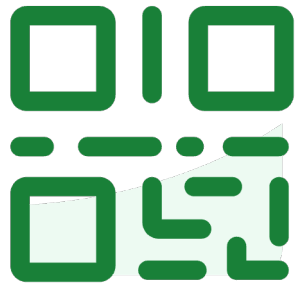
Notes for the SIT-DP module: **Developing Immersive Applications**

Created by: Chek Tien TAN



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Recap

- differentiate AR, VR, MR and XR
- describe the historical evolution of immersive technologies

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**VR was invented in the 21st
Century (2001 - 2100)**

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VR was invented in the 21st Century (2001 - 2100)

☐ True



0%

☐ False



0%

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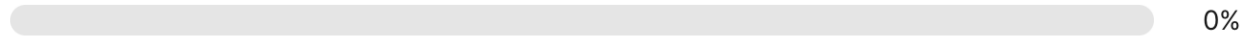


**Which device sparked the current
(21st Century) rise of VR?**

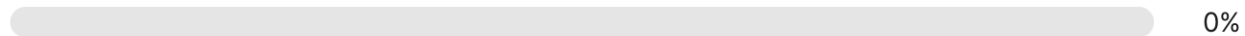
① Start presenting to display the poll results on this slide.

Which device sparked the current (21st Century) rise of VR?

☒ Sega VR



☒ Oculus Rift DK1



☒ Google Cardboard



☒ Oculus Quest



☒ Meta Quest 2



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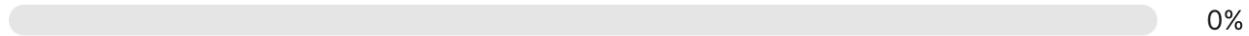


**What is the common public perception
(influenced by Microsoft) of the
difference between AR and MR?**

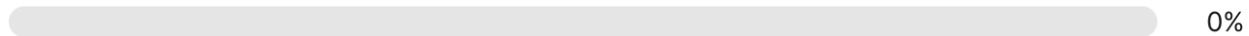
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What is the common public perception of the difference between AR and MR?

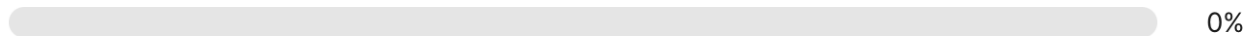
☒ They are the same



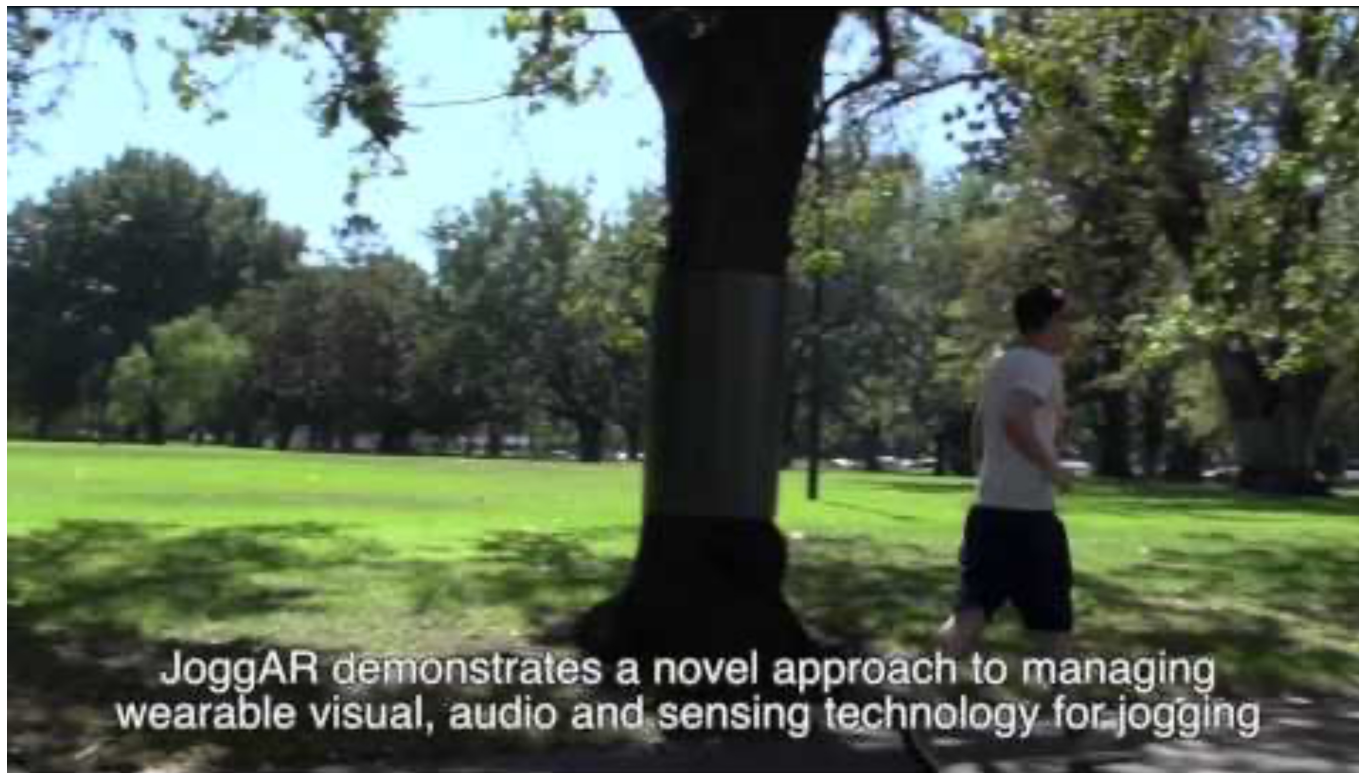
☒ AR refers to blending virtual objects onto the real-world



☒ Virtual entities in MR can interact with real-world objects



What type of experience is this?



JoggAR demonstrates a novel approach to managing wearable visual, audio and sensing technology for jogging

<https://youtu.be/d3wx3VGtFjo>

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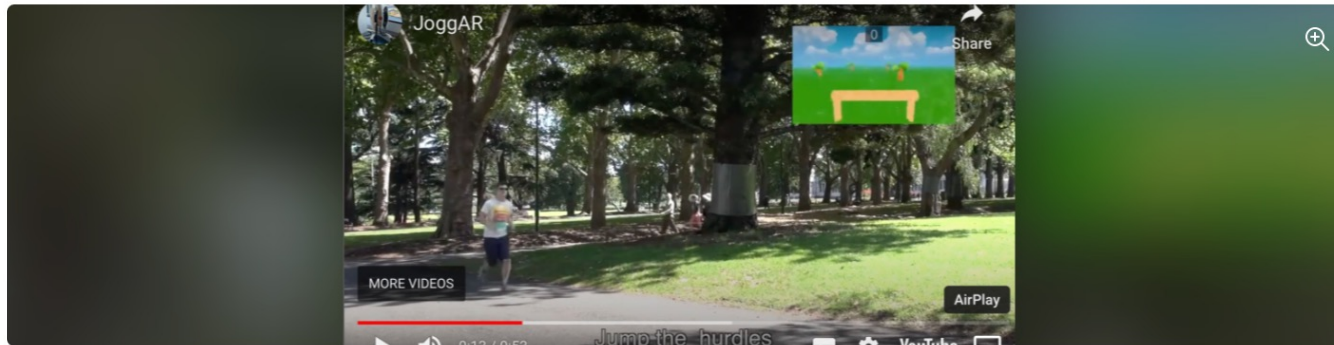
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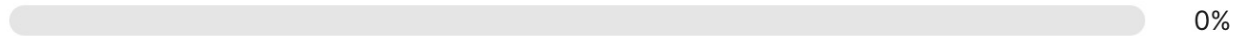
**What type of experience does
this best represent?**

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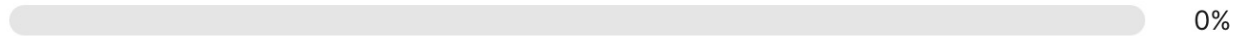
What type of experience is this?



☒ AR



☒ VR



☒ MR



What type of experience is this?



<https://youtu.be/d3wx3VGtFjo>

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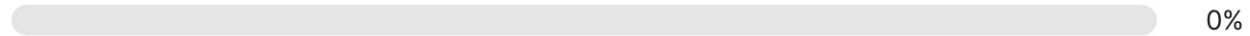
**According to Microsoft, what
type of experience does this
best represent?**

① Start presenting to display the poll results on this slide.

What type of experience is this?



☒ AR



☒ VR



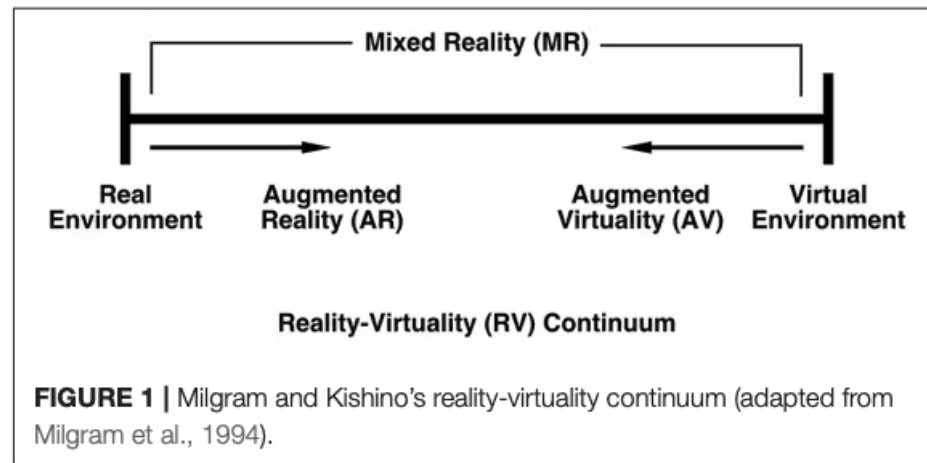
☒ MR



Milgram-Kishino's RV Continuum

- not the immersification continuum...
- originally meant for display technologies

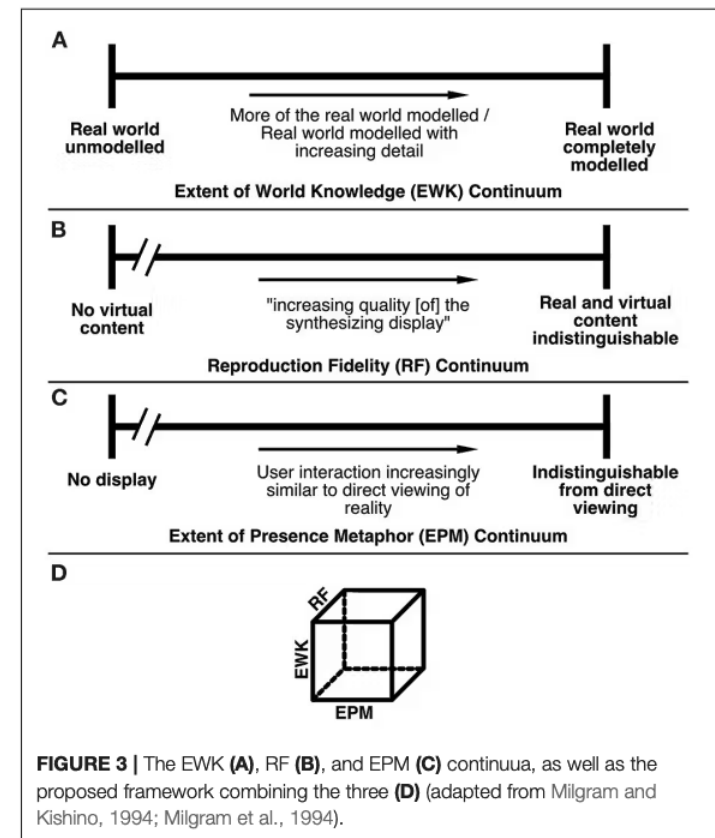
<https://doi.org/10.1117/12.197321>



Dimensions of RV Continuum

- EWK is how much system understands the real world
- RF is how realistic the assets are
- EPM is how interaction affords realism

<https://doi.org/10.1117/12.197321>



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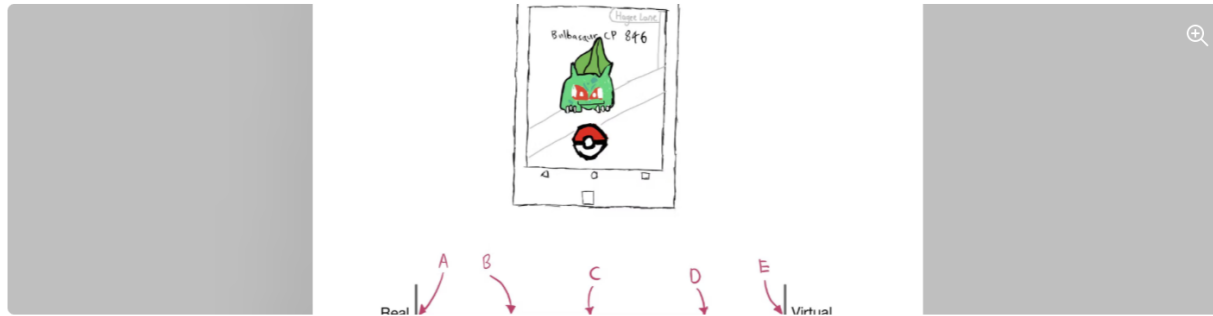
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**Where should Pokemon GO be
placed on the RV Continuum?**

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Where should Pokemon GO be placed on the RV Continuum?



☒ A



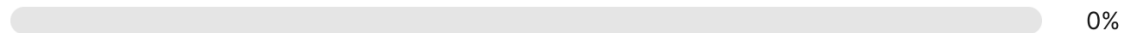
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☒ B



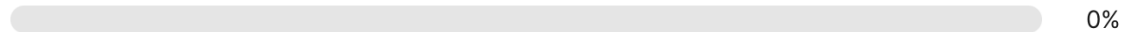
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☒ C



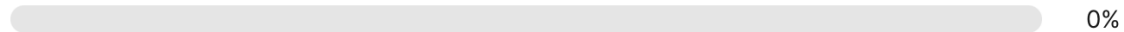
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☒ D



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☒ E



0%

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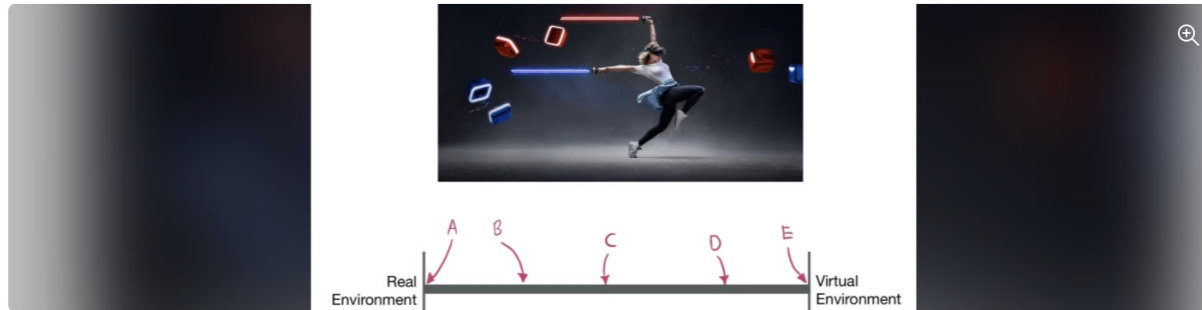
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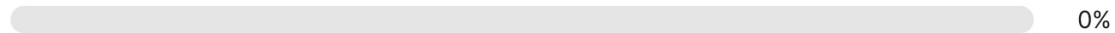
**Where should Beat Saber be
placed on the RV Continuum?**

① Start presenting to display the poll results on this slide.

Where should Beat Saber be placed on the RV Continuum?



☒ A



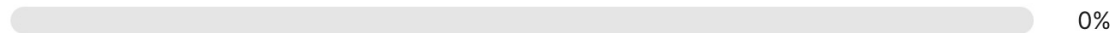
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☒ B



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☒ C



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☒ D



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☒ E



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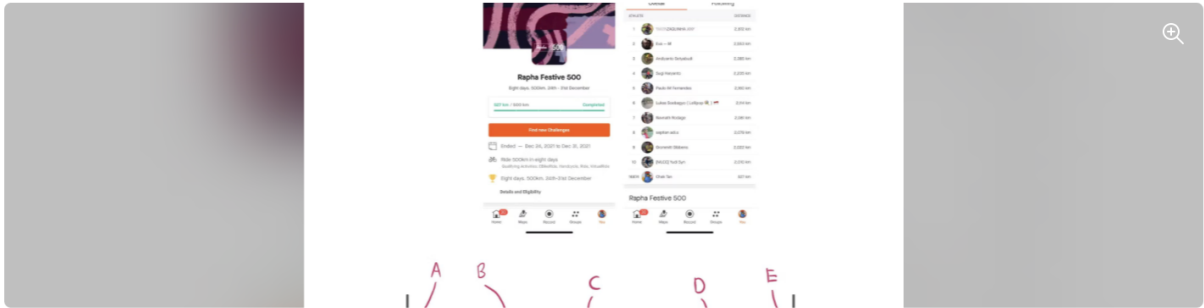
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**Where should Strava be placed on
the RV Continuum?**

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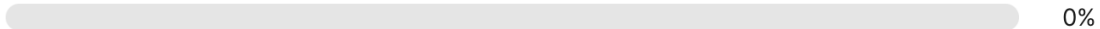
Where should Strava be placed on the RV Continuum?



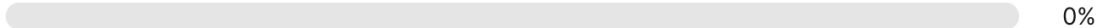
☒ A



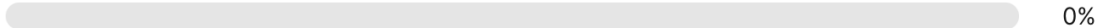
☒ B



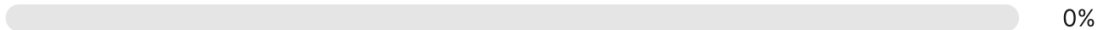
☒ C



☒ D



☒ E



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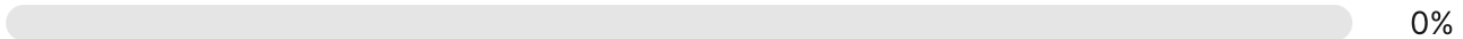


**Why is Strava not considered to be near the
extreme end of "Real Environment" in the RV
spectrum?**

① Start presenting to display the poll results on this slide.

Why is Strava not considered to be near the extreme end of "Real Environment" in the RV spectrum?

☑ It has some "Extent of World Knowledge"



☑ It has some "Reproduction Fidelity"



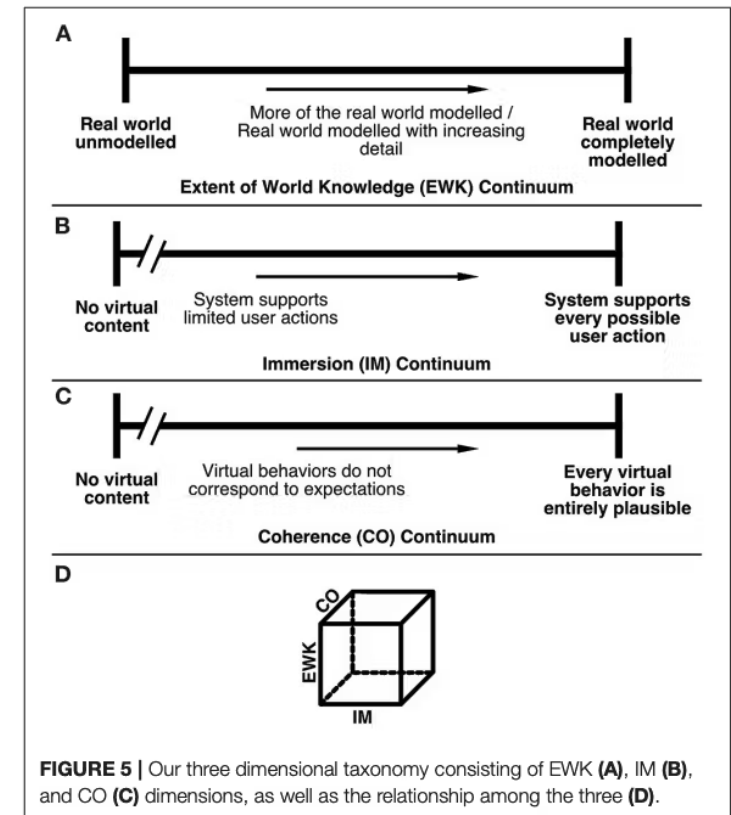
☑ It has some "Extent of Presence Metaphor"



Revisiting the RV Continuum

- combined the RF and EPM into IM (our THE article came before this 😅)
- added CO to represent the user
- note that this but one academic paper
- common perception of MR is different

<https://doi.org/10.3389/frvir.2021.647997>



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"The 3D models are extremely high quality."

What dimension of the RV continuum is this referring to?

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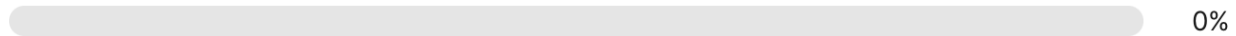
"The 3D models are extremely high quality."

What dimension of the RV continuum is this referring to?

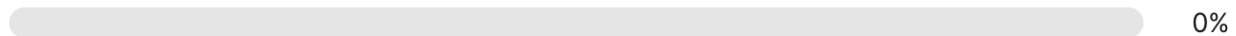
☒ "Extent of World Knowledge"



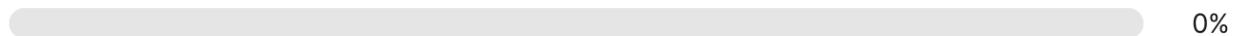
☒ "Reproduction Fidelity"



☒ "Extent of Presence Metaphor"



☒ "Coherence"



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"The 3D virtual dogs are able to jump onto the real table seen through the camera."

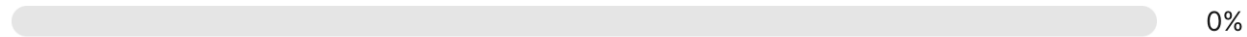
What dimension of the RV continuum is this referring to?

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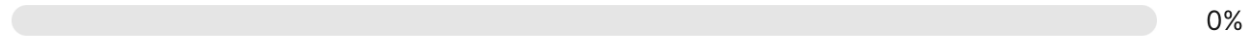
"The 3D virtual dogs are able to jump onto the real table seen through the camera."

What dimension of the RV continuum is this referring to?

☒ "Extent of World Knowledge"



☒ "Reproduction Fidelity"



☒ "Extent of Presence Metaphor"



☒ "Coherence"



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**"The stereo optics provide a perception of depth
through an LCD display."**

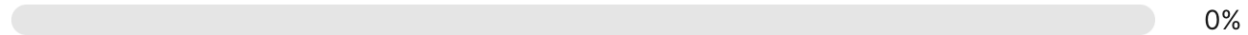
**What dimension of the RV continuum is this
referring to?**

① Start presenting to display the poll results on this slide.

"The stereo optics provide a perception of depth through an LCD display."

What dimension of the RV continuum is this referring to?

☐ "Extent of World Knowledge"



☐ "Reproduction Fidelity"



☐ "Extent of Presence Metaphor"



☐ "Coherence"



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**"For a moment I believed that I was actually 1000ft
above ground."**

**What dimension of the RV continuum is this
referring to?**

① Start presenting to display the poll results on this slide.

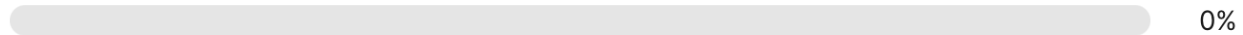
"For a moment I believed that I was actually 1000ft above ground."

What dimension of the RV continuum is this referring to?

☒ "Extent of World Knowledge"



☒ "Reproduction Fidelity"



☒ "Extent of Presence Metaphor"



☒ "Coherence"

