

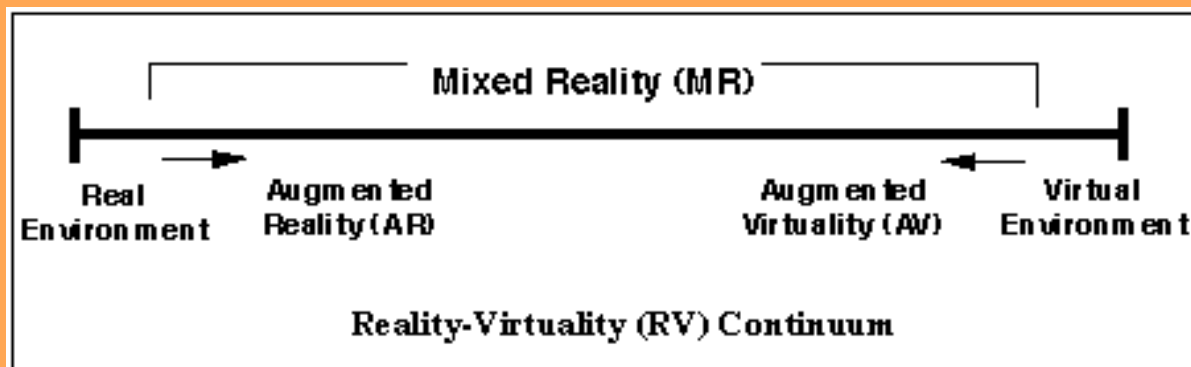
# Augmented and Mixed Reality/ Virtuality in Game Design



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# What are Augmented and Mixed Realities/Virtualities?

- Mixed Reality: a harmonious combination of real-world and virtual components to shape a perceived reality.
- Augmented Reality: the compositing of virtual factors onto a real-world environment
- Augmented Virtuality: the addition of real-world components to a virtual setting.



Milgram's Continuum

# Types of Mixed Reality Games

- Handheld Display: Mixed Reality Displayed through the screen of an image capturing device (such as a camera phone).
- Head-mounted Display: Mixed Reality Displayed through the use of a semi-transparent, head-mounted device.



Gameplay captured through Handheld Display



Gameplay captured through Head-Mounted Display

# ARQuake

- Augmented Reality recreation of id software's original "Quake."
- Developed at the University of South Australia in 2000.
- <http://www.youtube.com/watch?v=yNYfkxqiB6g>



# Equipment

- P.C. Pack
- Six-degrees of freedom tracker
- G.P.S.
- Magnetic Compass



# Success as a Game

- Enters the player into a state of immersion unlike anything that is possible for another gaming medium.
- Takes full advantage of players' extrinsic knowledge base.
- Has a unique ability to remove players from day-to-day life, by working to keep them in physical reality.



# Final Video

<http://www.youtube.com/watch?v=Qb5rACCUC1g&NR=1>