

Expedition: Nature and People

Proposal for a Virtual Reality Show

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Flower and People, Cannot be controlled but Live Together



<https://www.youtube.com/watch?v=UBdsOM9p5UA>

Flower Forest: Lost, Immersed and Reborn

TeamLab, 2017, Interactive Digital Installation



Create A Virtual World

- Teamlab
- - Art collective formed in 2001.
- - Creative group that includes artists, programmers, engineers, CG animators, mathematicians, architects, web and print graphic designers and editors
- - Aims to go beyond the boundaries between art, science, technology and creativity, through co-creative activities

Proposal

- Wear Head-mounted display (HMD)
- Enter in a house with seven rooms
- Each room has a VE (virtual environment) system with different topics: mountain, sea, desert, forest, water fall and lake.
 - Use **Cave Automatic Virtual Environments (CAVE)**
 - Project images on the walls, floor and ceilings of rooms
 - **Passive haptics**
- Participants can randomly choose a room and get into it without knowing the topic.
- And then start their expedition!



Expedition: Nature and People



Virtual Reality Environment

- Using computer technology to create a simulated, three-dimensional world that a user can manipulate and explore while feeling as if he was in that world
 - Three-dimensional images that appear to be life-sized from the perspective of the user
 - The ability to track a user's motions



Effective VR Experience

- **Immersion**

- depth of information
- breadth of information

- **Interact with environment**

- visual
- audio
- haptic systems (sense of touch)

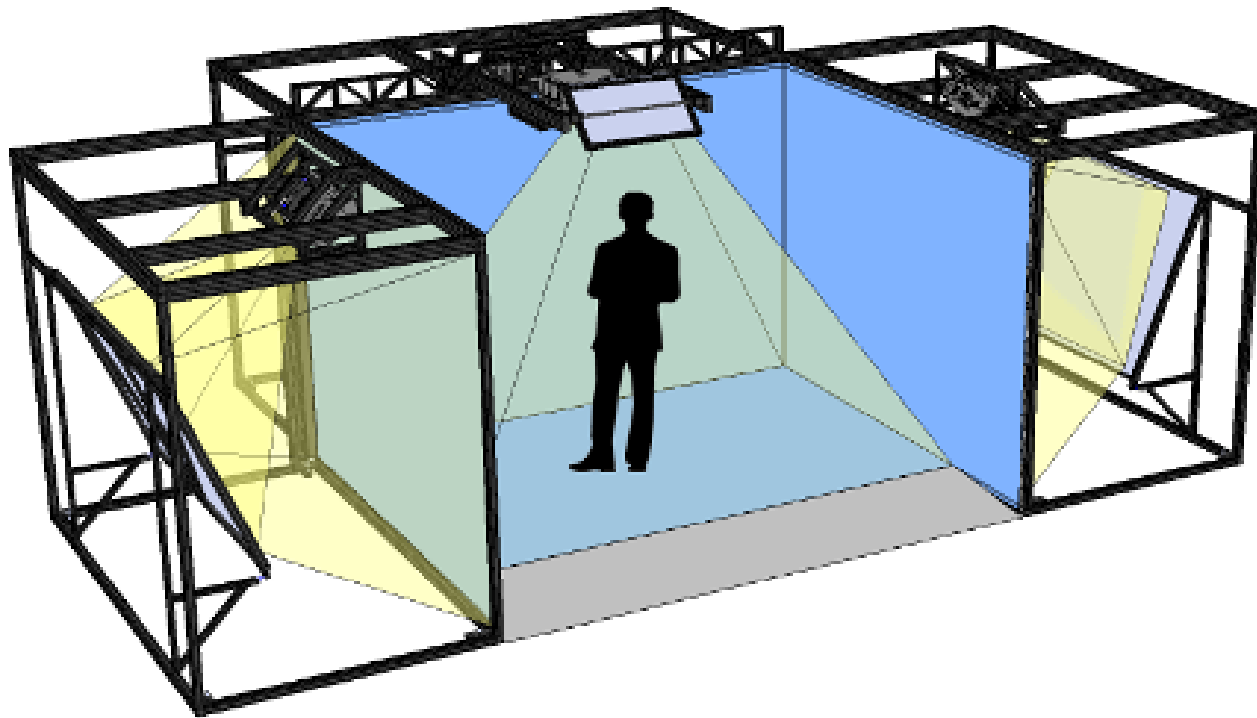
* displays must project a frame rate of at least 20 - 30 frames per second in order to create a convincing user experience.

Lack of Interaction



Kotaku Virtual Reality Roller Coaster

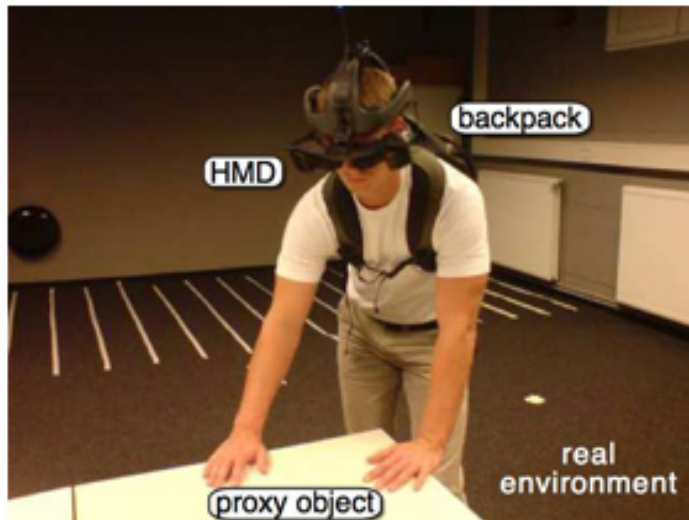
Cave Automatic Virtual Environments (CAVE)



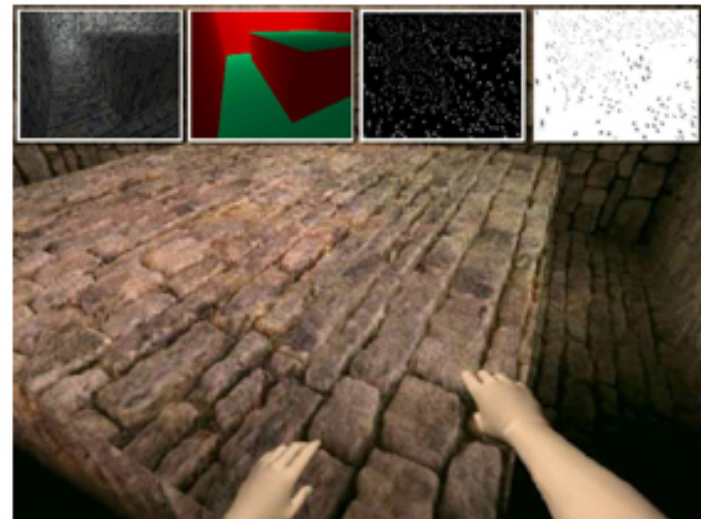
Effective VR Experience

- **Passive Haptics**

- Real objects in a physical space that are mapped to virtual objects in a virtual space



(a) Experimental setup



(b) User's perspective

References

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- Strickland, Jonathan. How Virtual Reality Works. *electronics.howstuffworks.com*. Web
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