

# 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

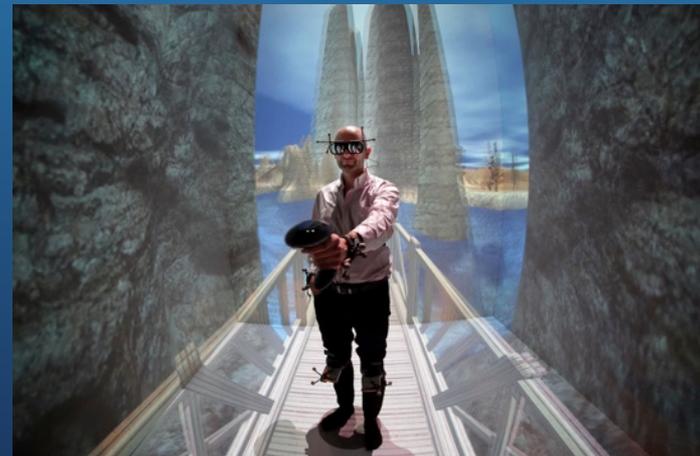
- **Wear Head-mounted display (HMD)**
- **Enter in a house with seven rooms**
- **Each room has a VE (virtual environment) system with different topics: mountain, sea, desert, forest, water fall and lake.**
  - **Use Cave Automatic Virtual Environments (CAVE)**
  - **Project images on the walls, floor 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!**





# 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**

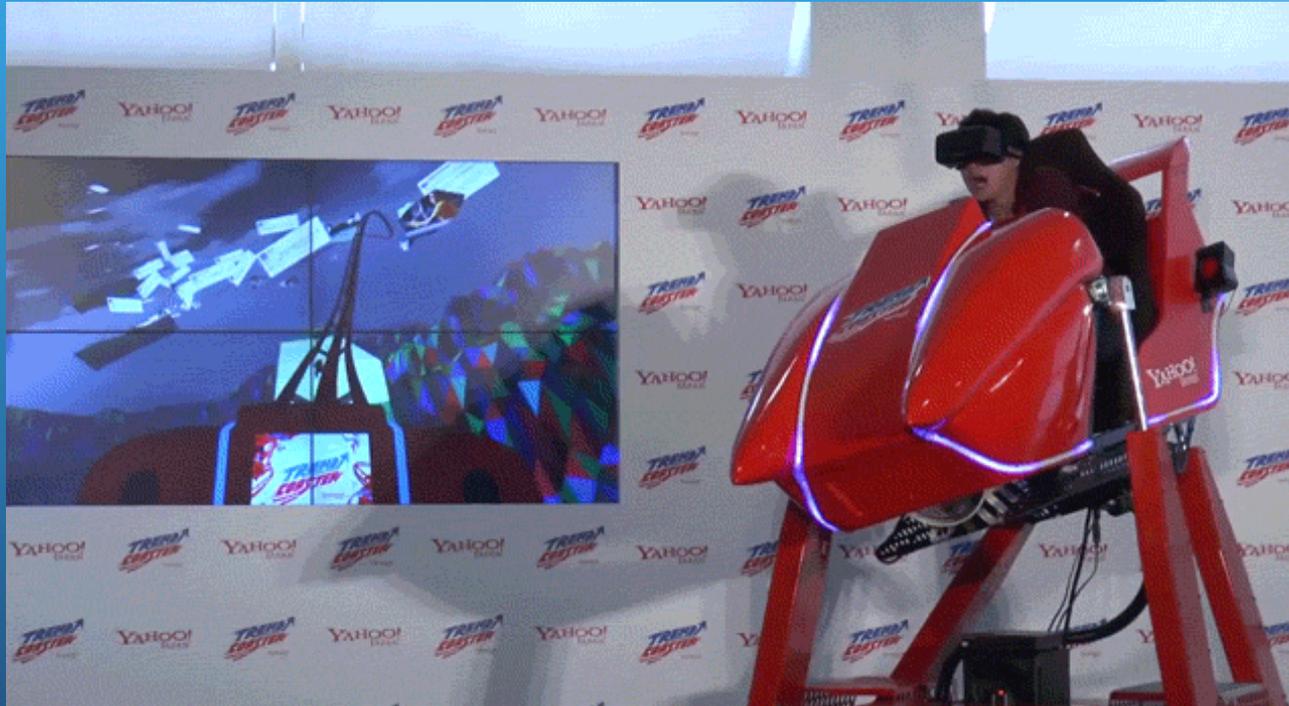
- **depth of information**
- **breadth of information**

- **Interact with environment**

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

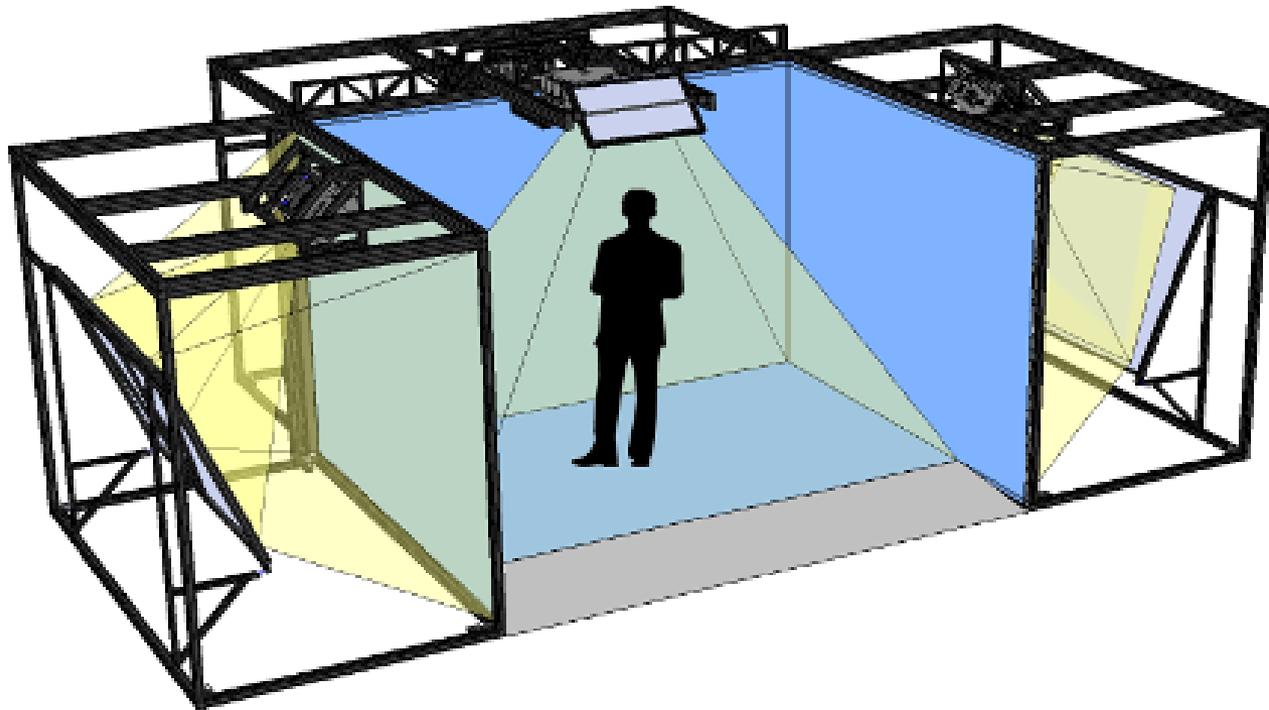
\* displays must project a frame rate of at least 20 - 30 frames per second in order to create a convincing user experience.

# Lack of Interaction



Kotaku Virtual Reality Roller Coaster

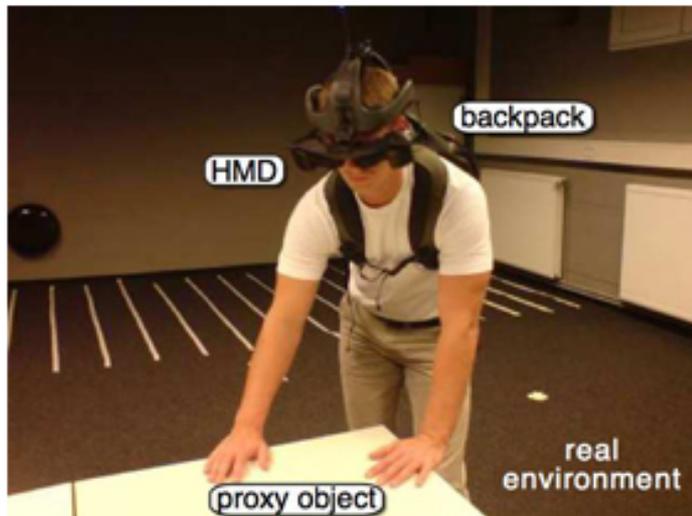
# Cave Automatic Virtual Environments (CAVE)



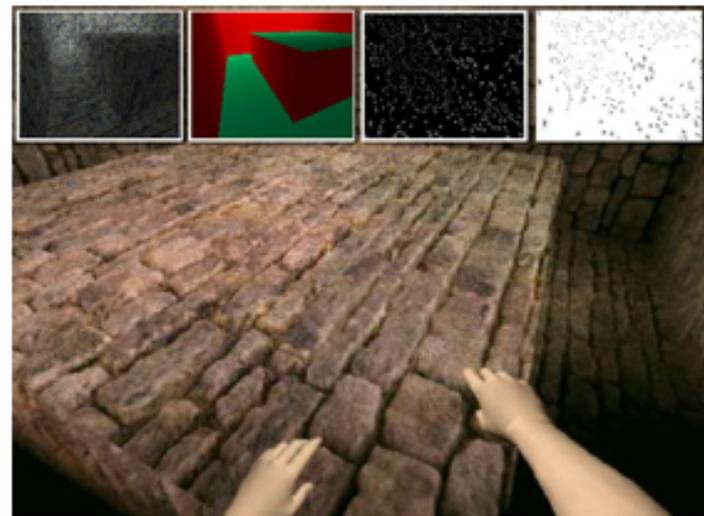
# Effective VR Experience

- **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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