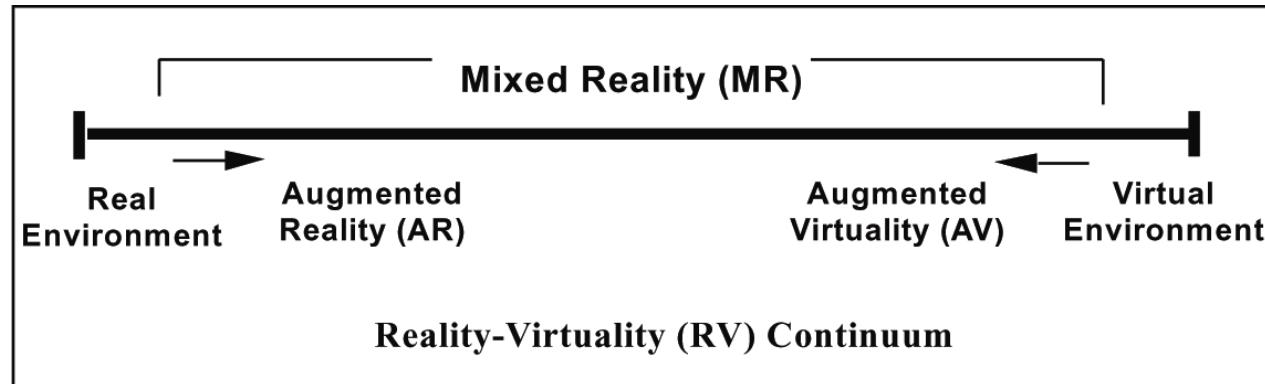


Why study Computer Graphics ?

- Fundamentally Its what the user sees when they interact with a computer .
- Its computer graphics that gives us a “looking glass into a mathematically wonderland”
 - (Ivan Sutherland)

Mixed & Augmented Realities



Milgram et al (1994)

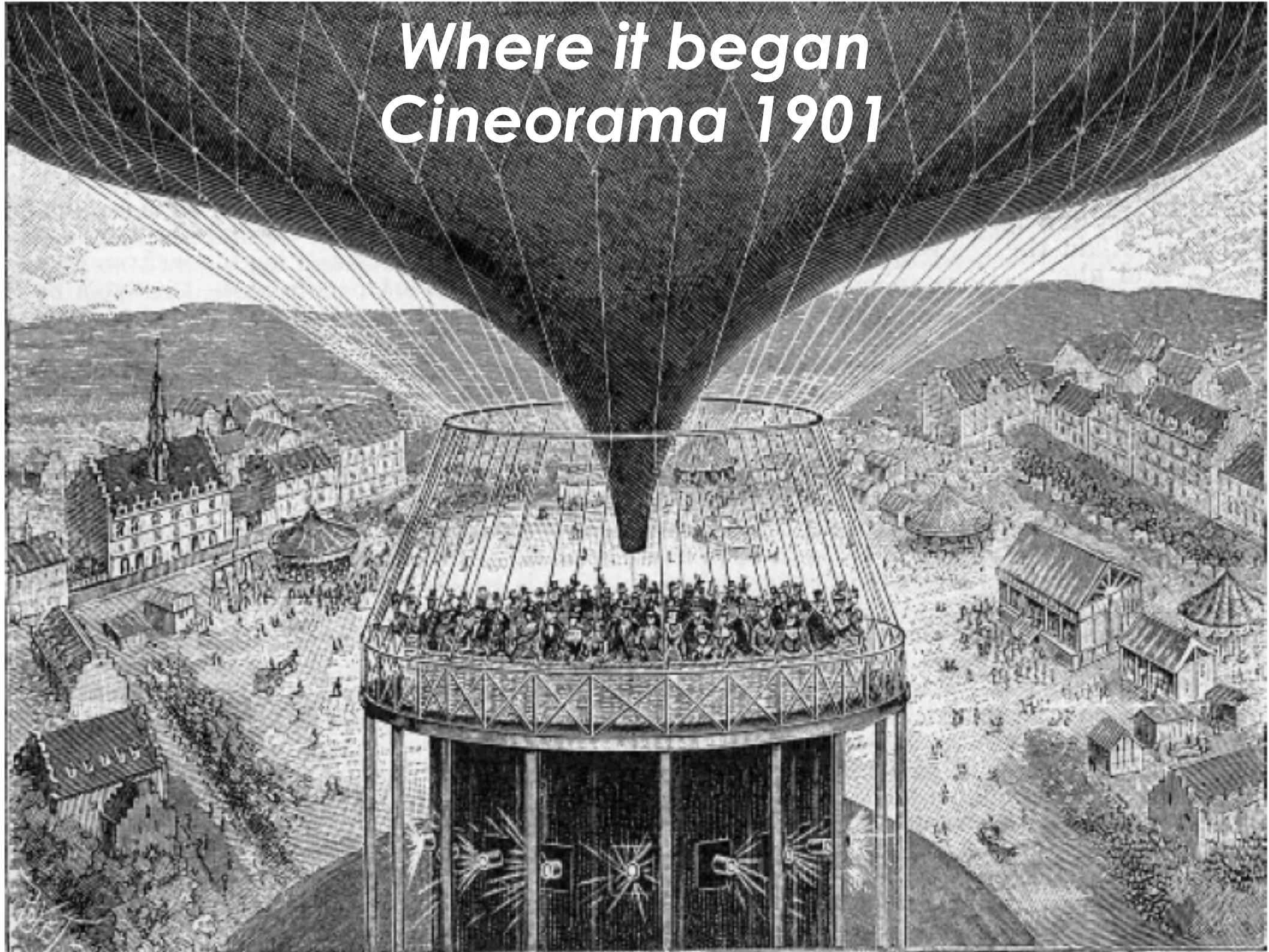


Augmented Reality



Augmented Virtuality

Where it began Cineorama 1901

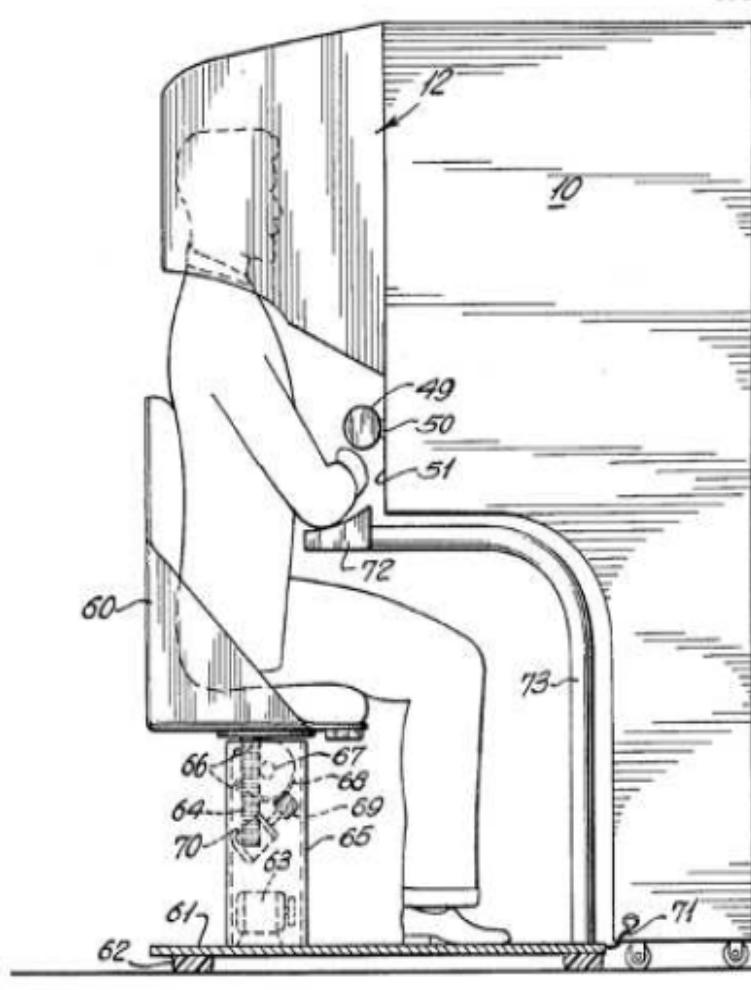




An illustration of the Cineorama at the 1900 Exposition Universelle in Paris
Source: [Scientific American, 1900]

Cinéorama was an early film experiment and amusement ride presented for the first time at the 1900 Paris Exposition. It was invented by Raoul Grimoin-Sanson and it simulated a ride in a hot air balloon over Paris. It represented a union of the earlier technology of panoramic paintings and the recently invented technology of cinema. It worked by means of a circulatory screen that projects images helped by ten synchronized projectors.

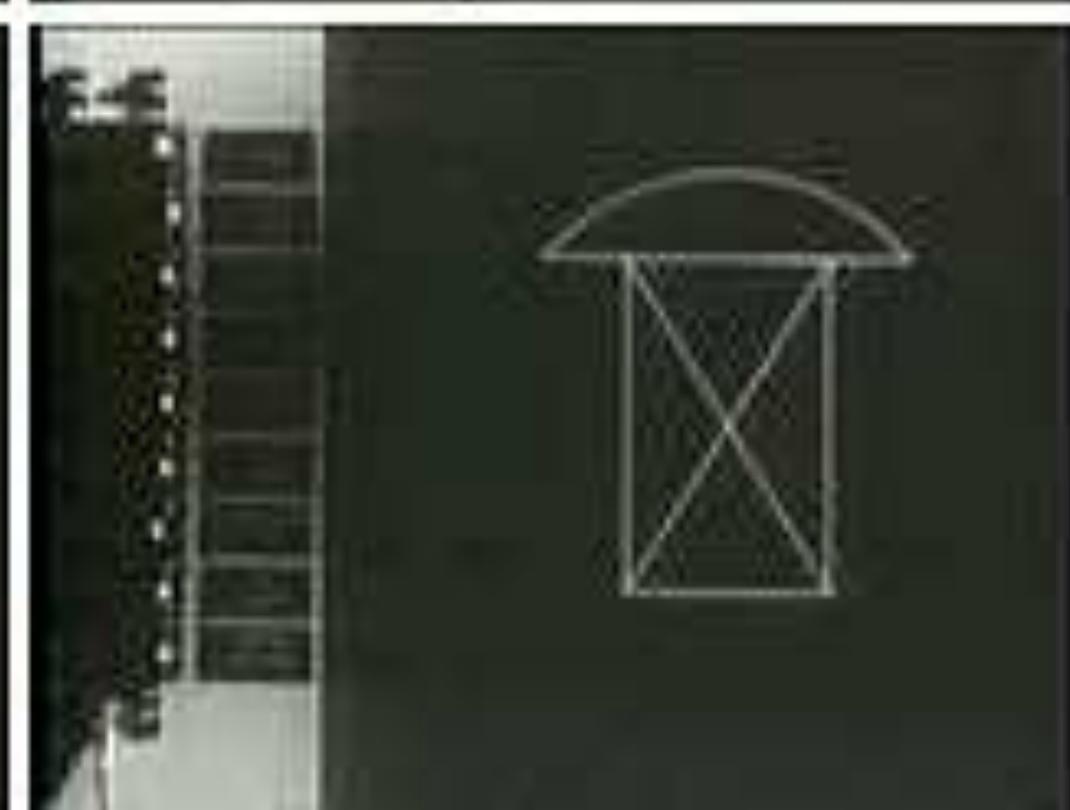
Morton Heilig's Sensorama



American cinematographer and inventor [Morton Heilig](#) described his vision of a multi-sensory theater in a 1955 paper entitled "The Cinema of the Future."

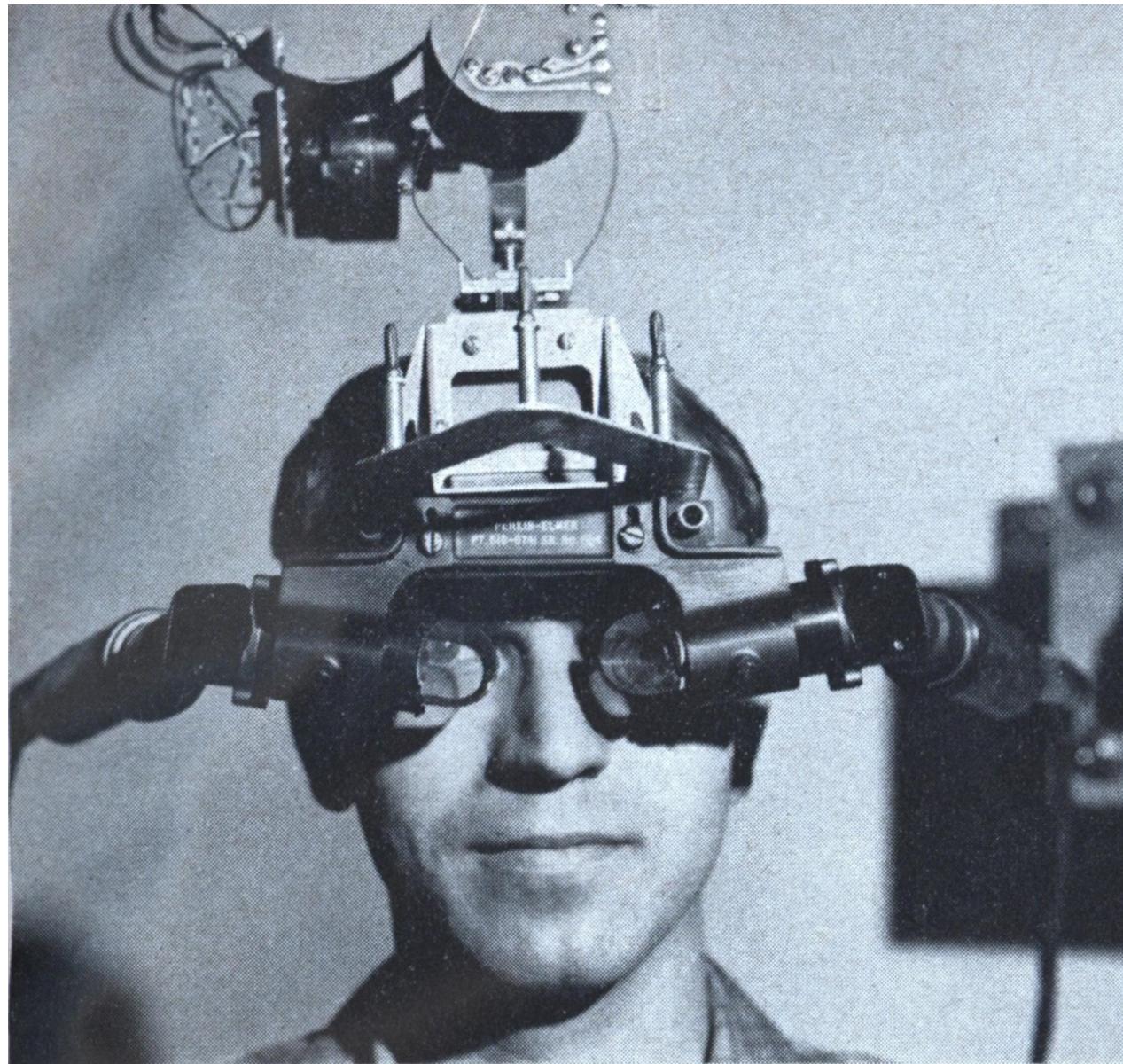
A photograph of the Sensorama Simulator in use (Image c Morton Heilig, reproduced with permission) Right: An illustration of some of the Sensorama's workings (Source: [Heilig, 1962])

Computer Graphics is born by Dr. Sutherland and his SKETCHPAD



Sword of Damocles

First VR/AR head mounted Display



Film again hints at the future



Shared Reality/ Artificial Reality

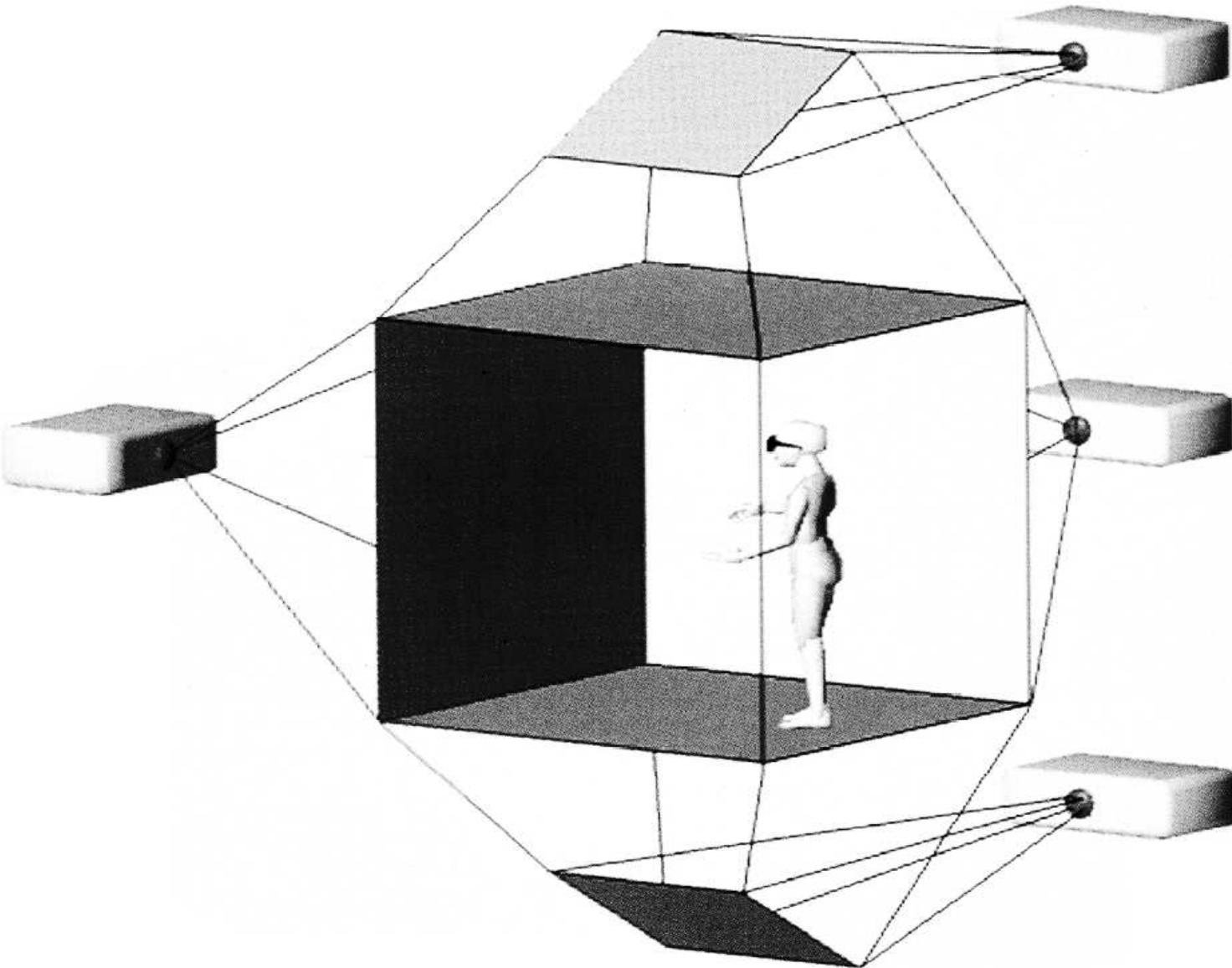
(Myron Krueger)



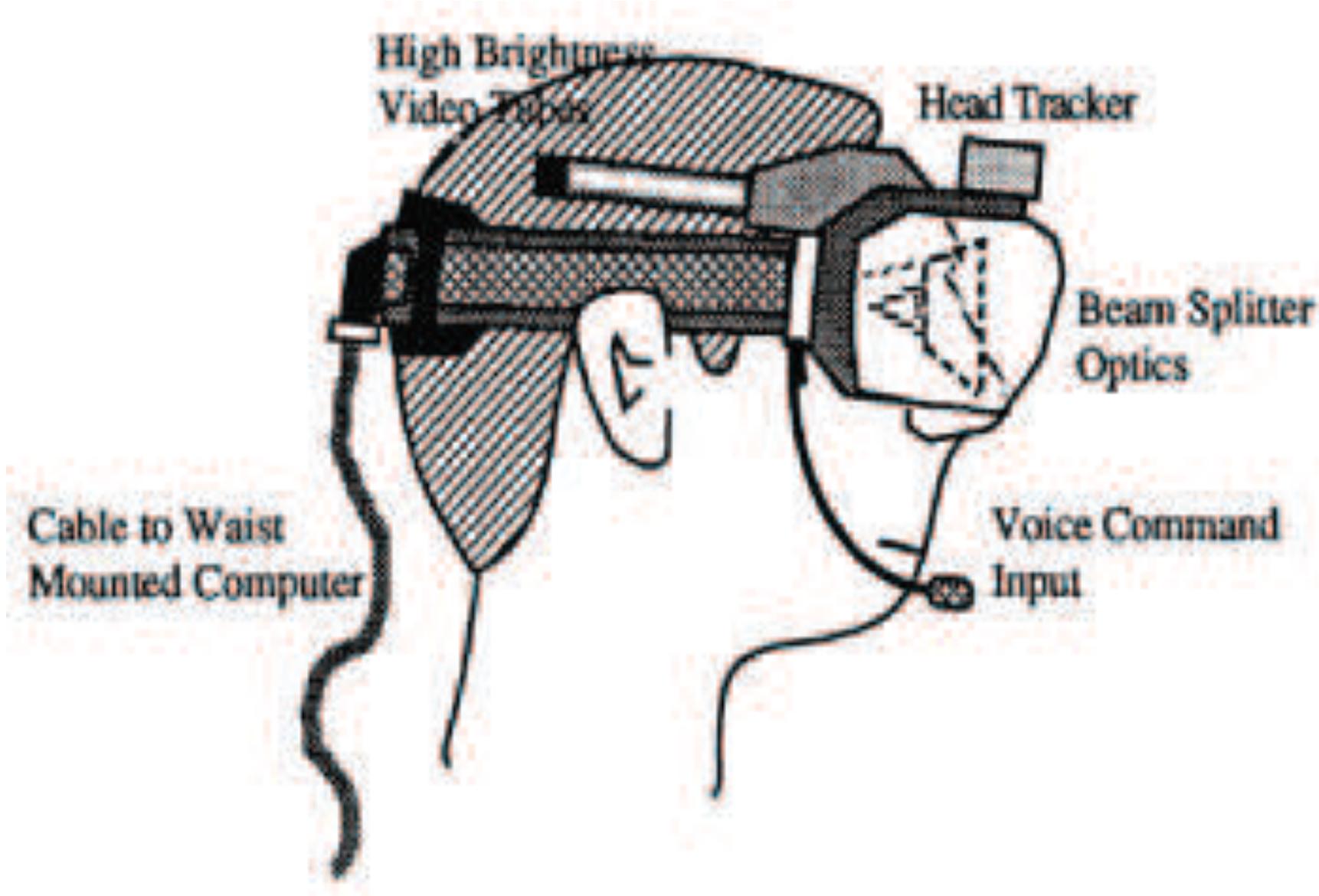
Hollywood inspires again



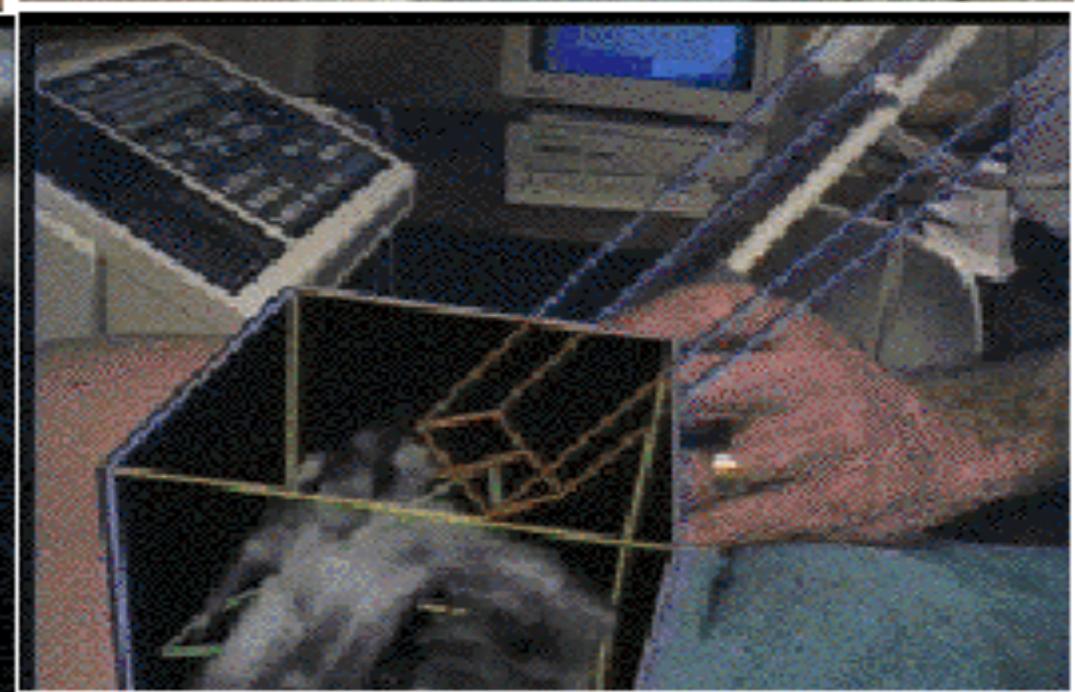
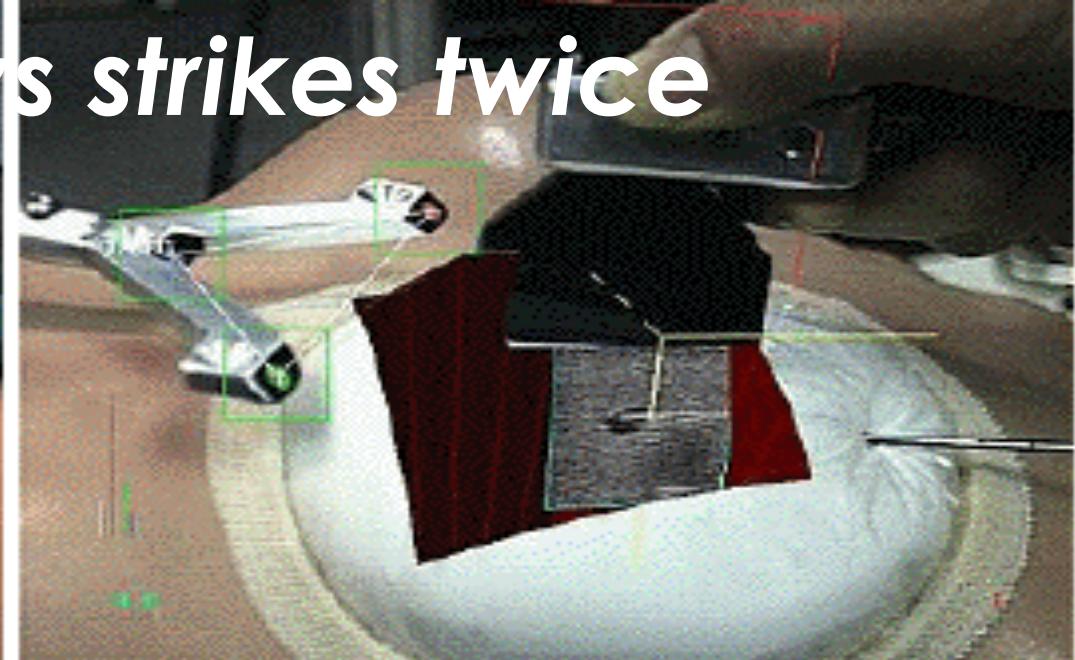
Plato would be proud of Cruz-Neira's Cave



Boeing's Augmented Reality Idea, giving AR its name



Ideas always strikes twice



AR toolkit Markers(Billinghurst and Kato)

