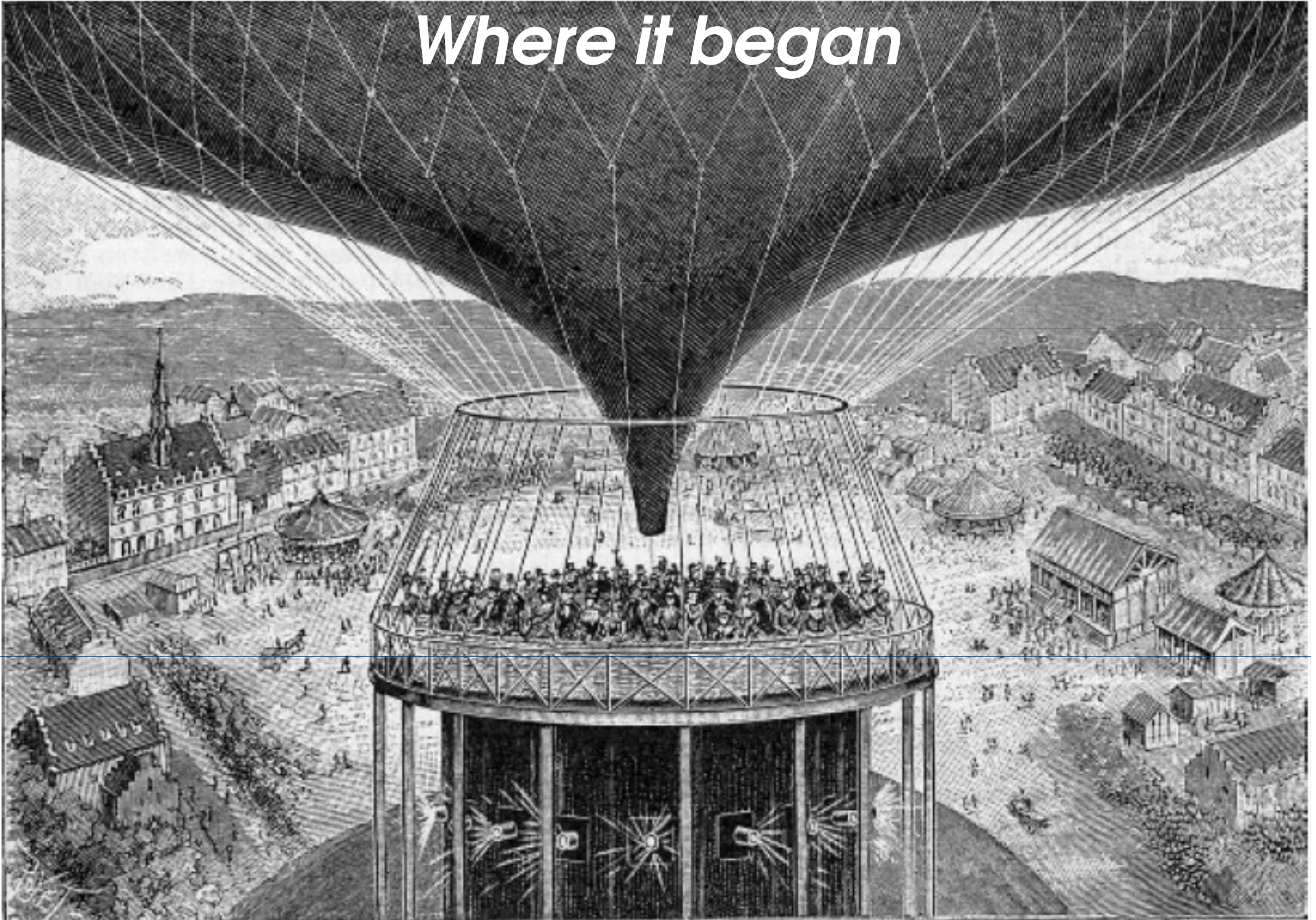


Talk on the History, Present Future of Augmented Reality

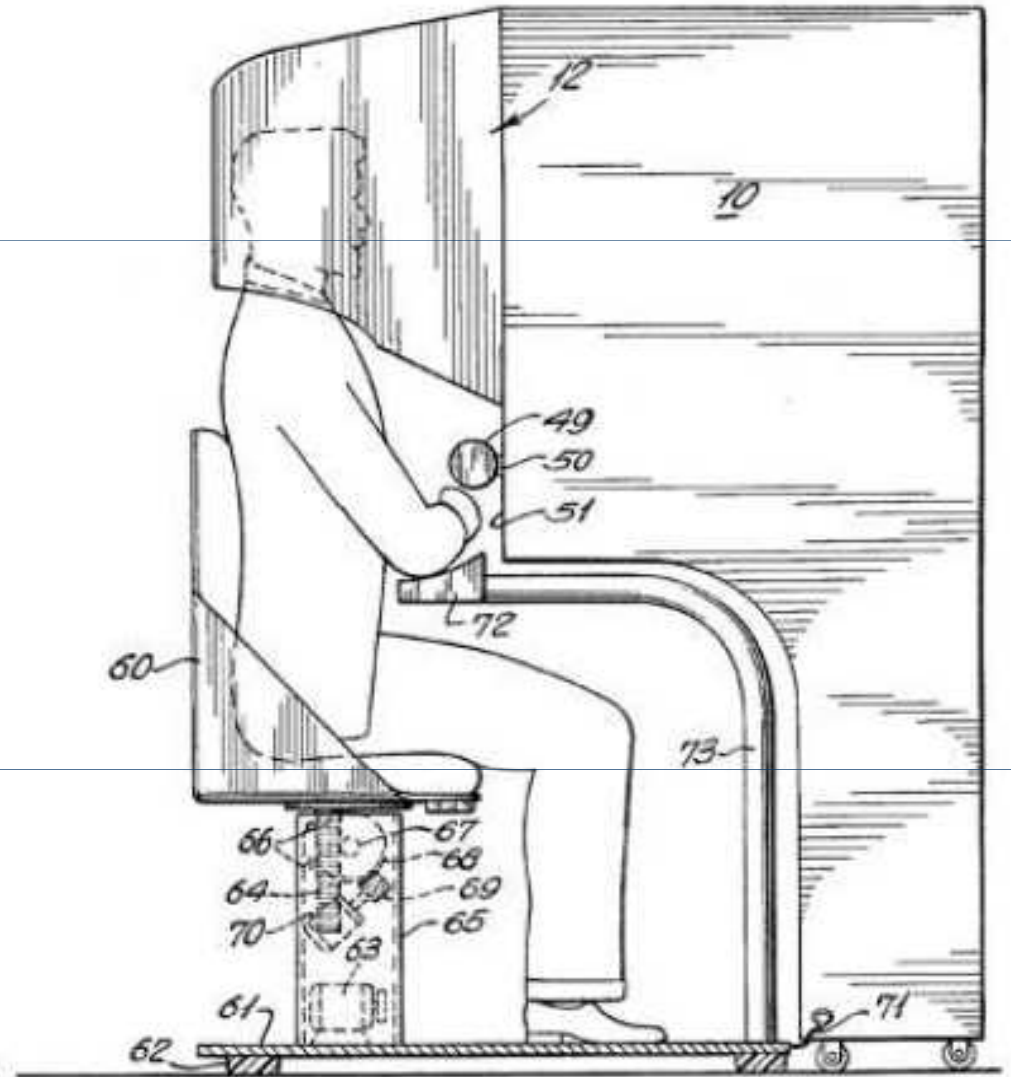
- *What is Augmented Reality(AR)?*
- *History of its Development*
- *Current AR examples*
- *Future of AR*

Where it began



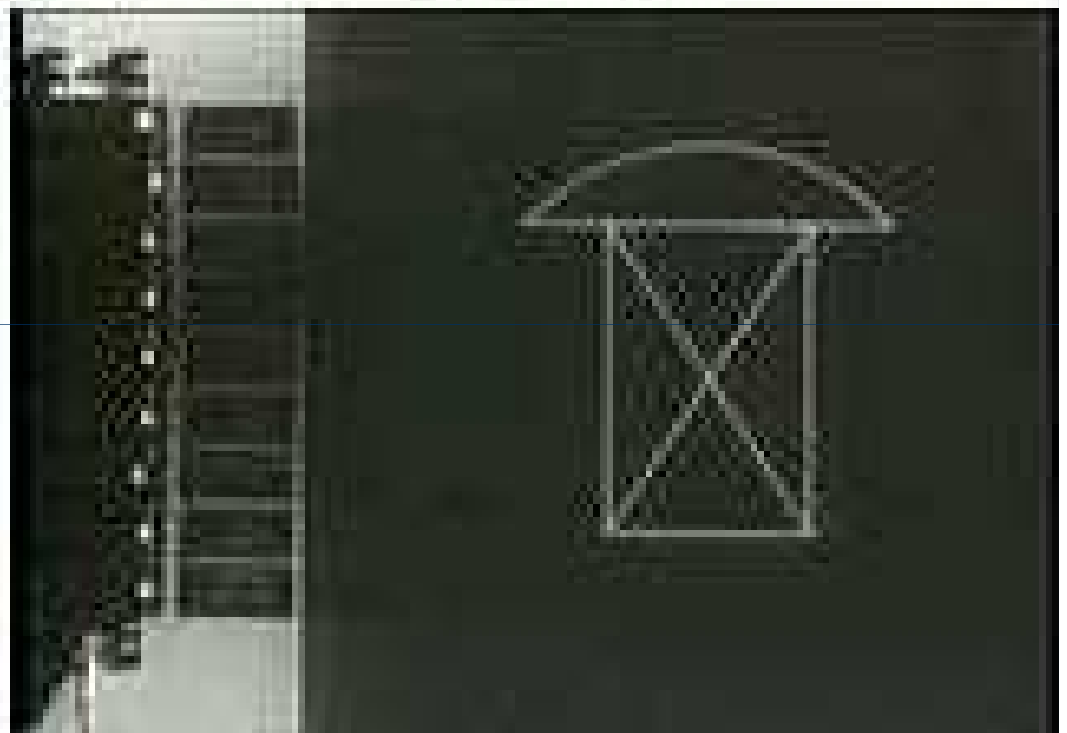
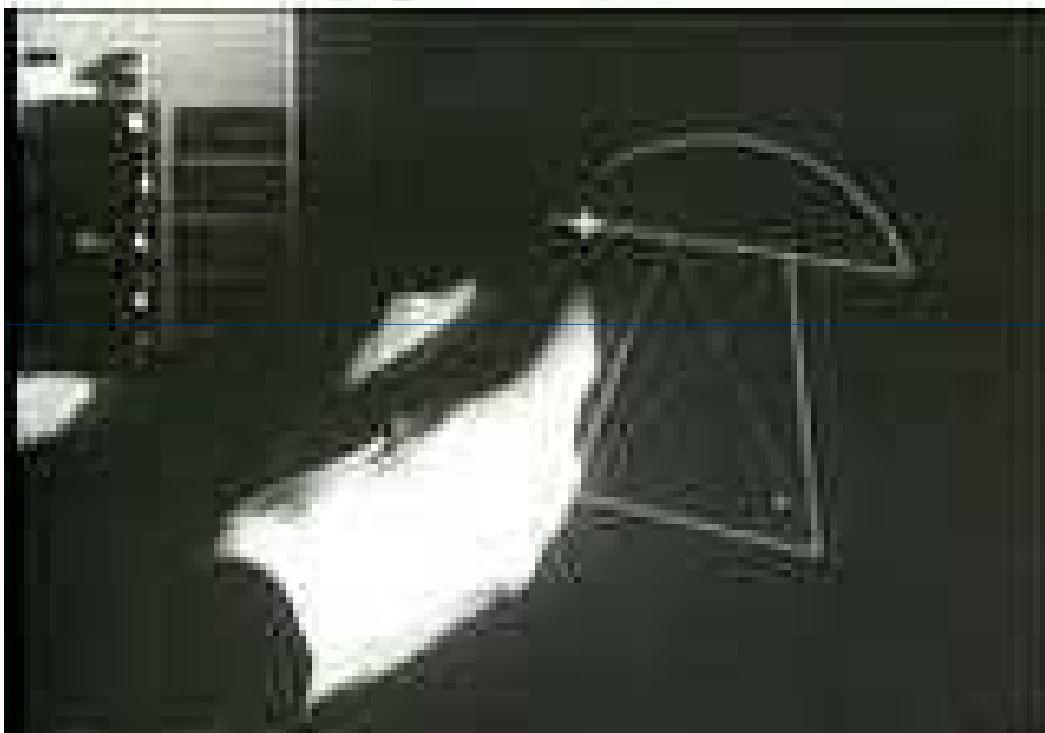
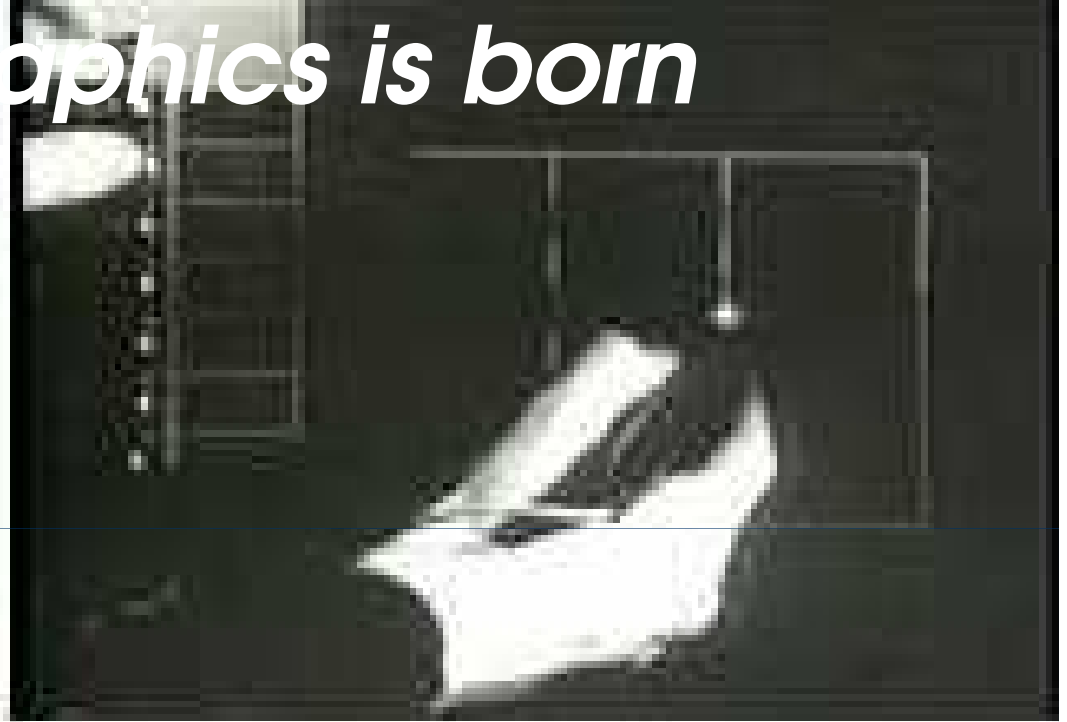
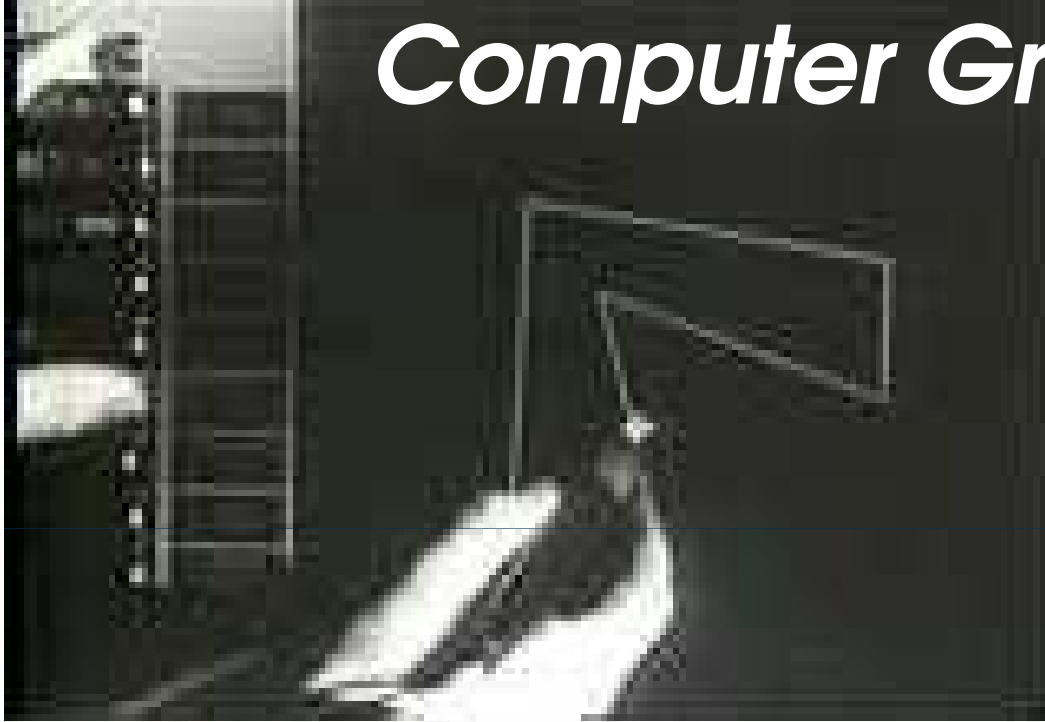
An illustration of the Cineorama at the 1900 Exposition Universelle in Paris
(Source: [Scientific American, 1900

Ahead of its time



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



Film again hints at the future



A scene from the "Mary Poppins"[Travers, 1964]

The next step



FIGURE 1-17 *Ivan Sutherland*

Shared Reality

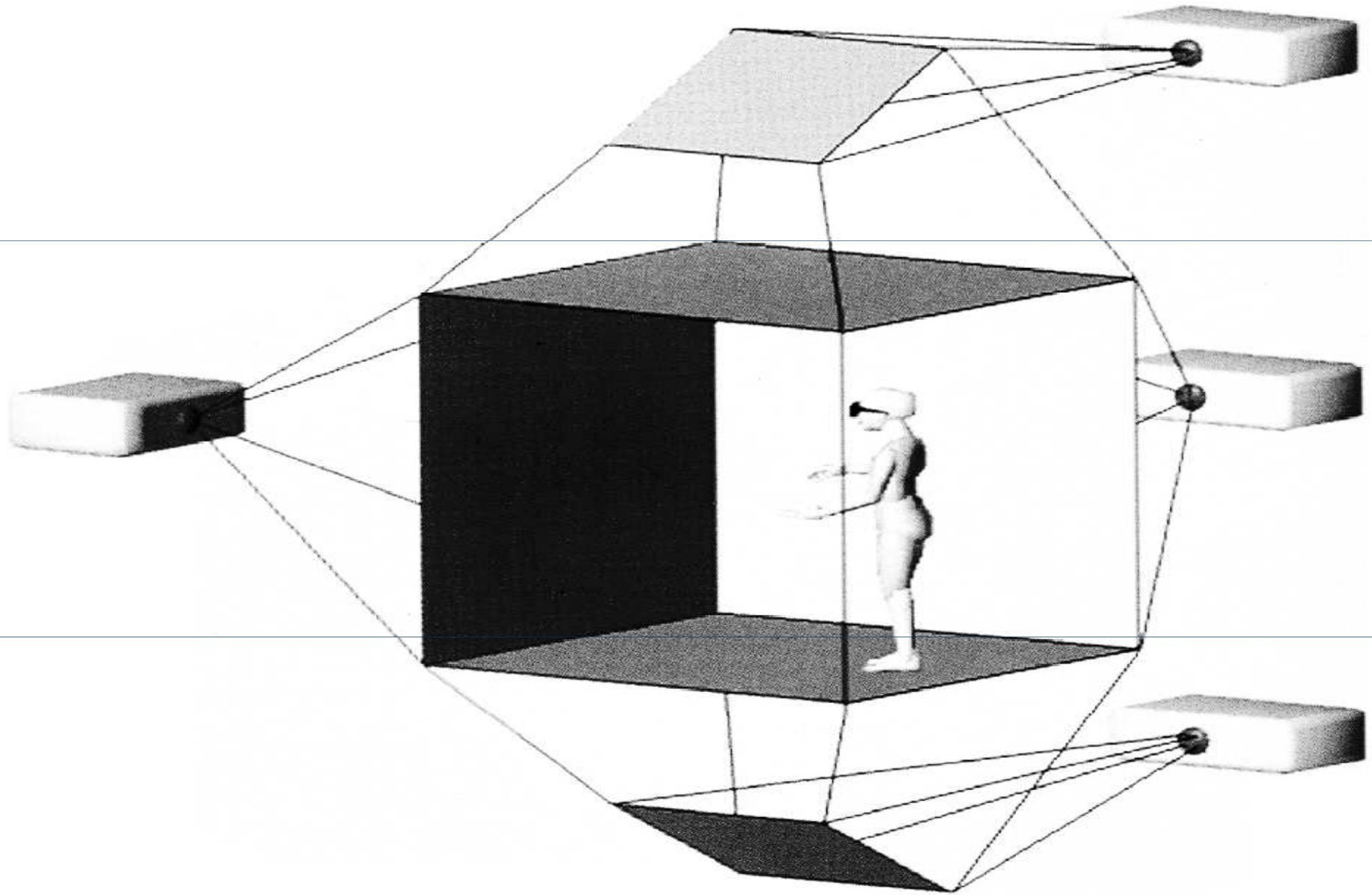


1983 Myron Krueger develops the concept of "Artificial Reality"

Hollywood inspires again

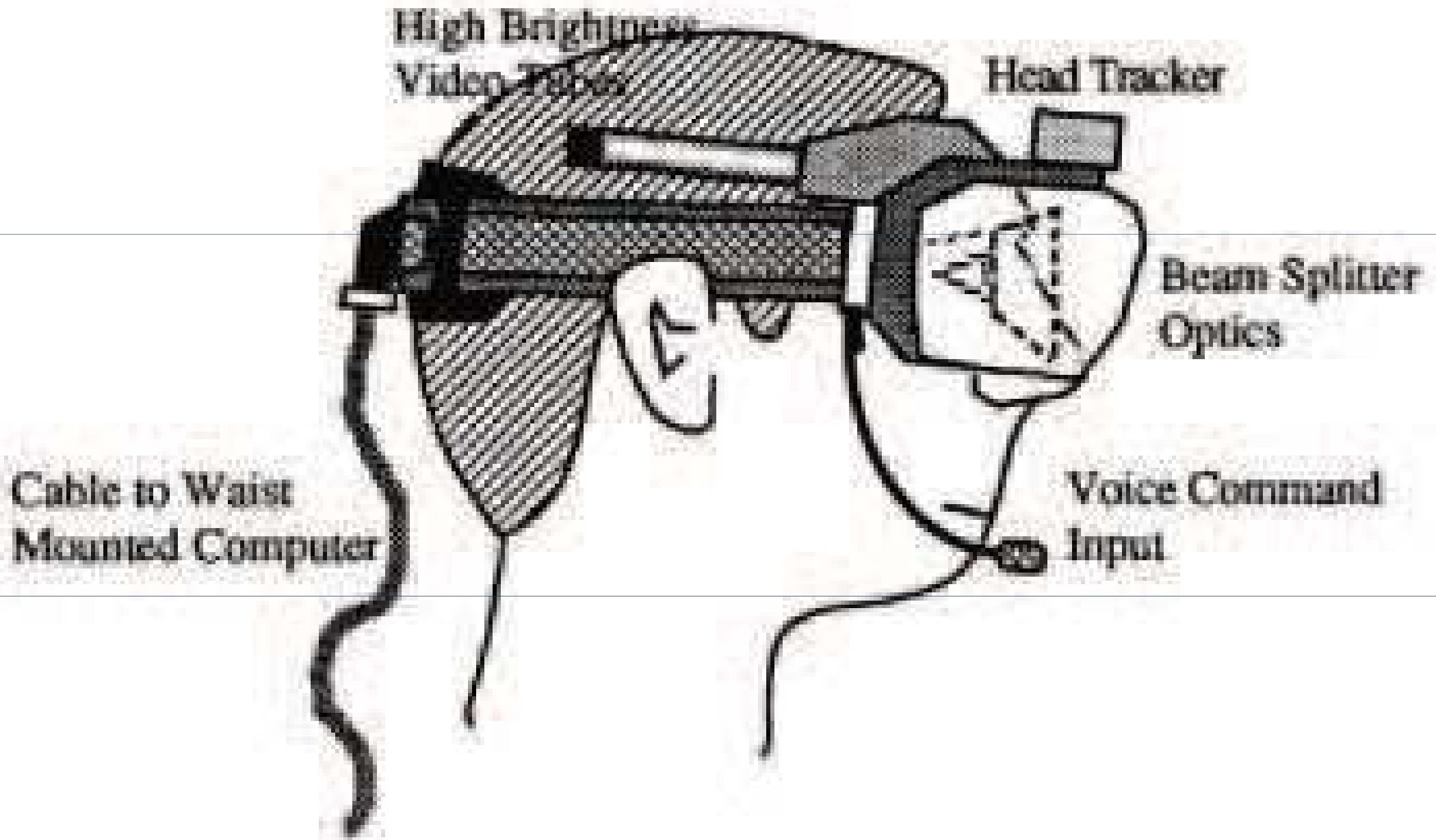


Plato would be proud



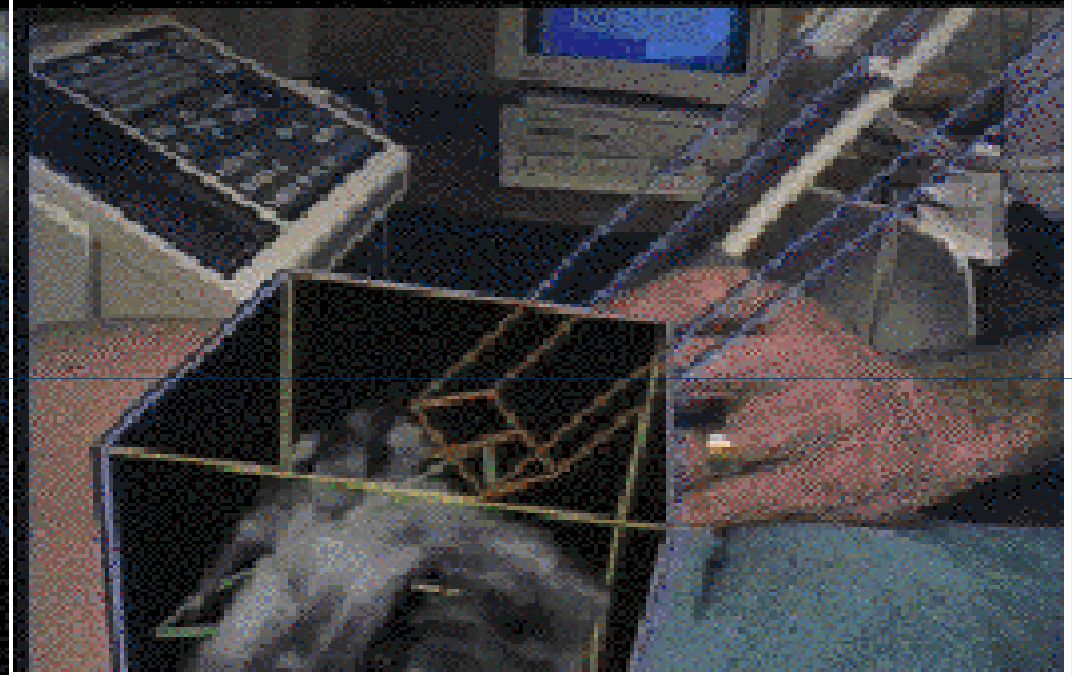
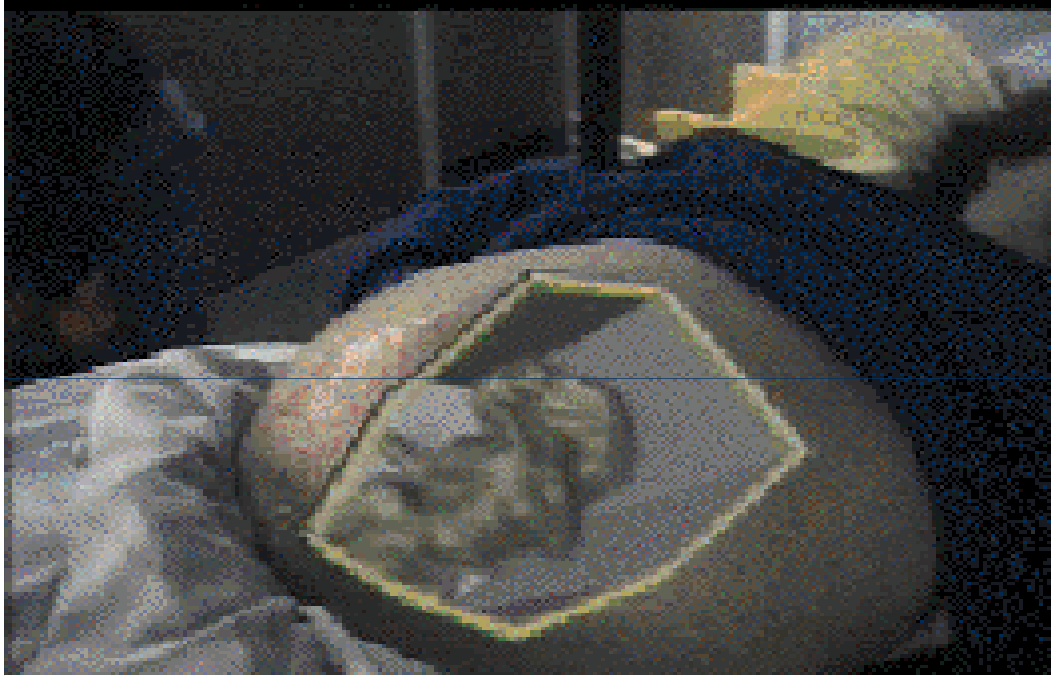
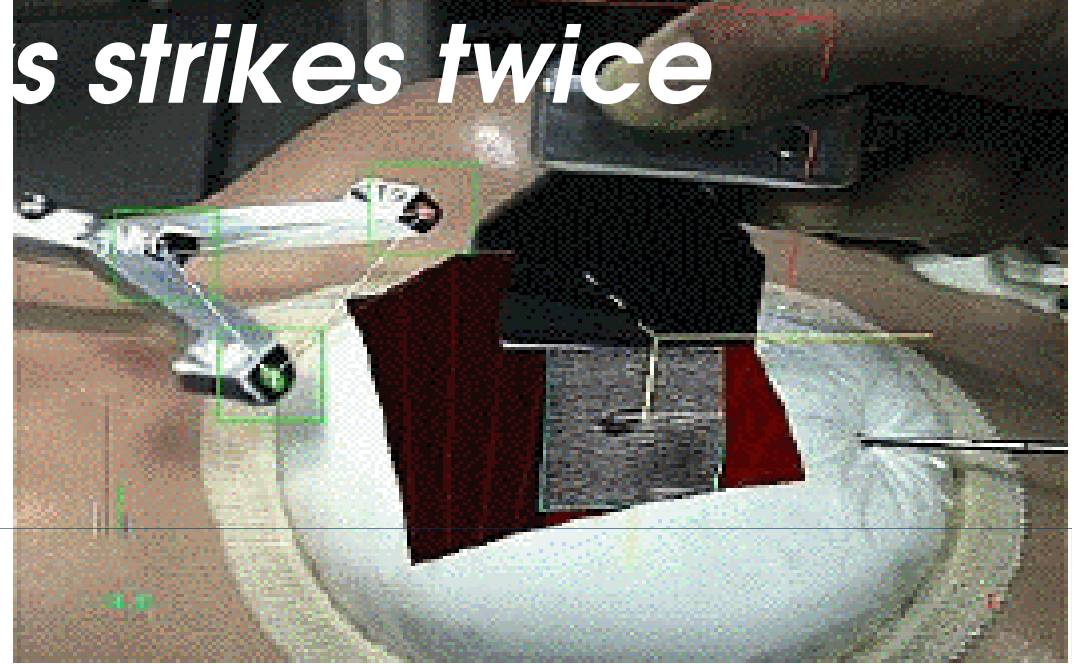
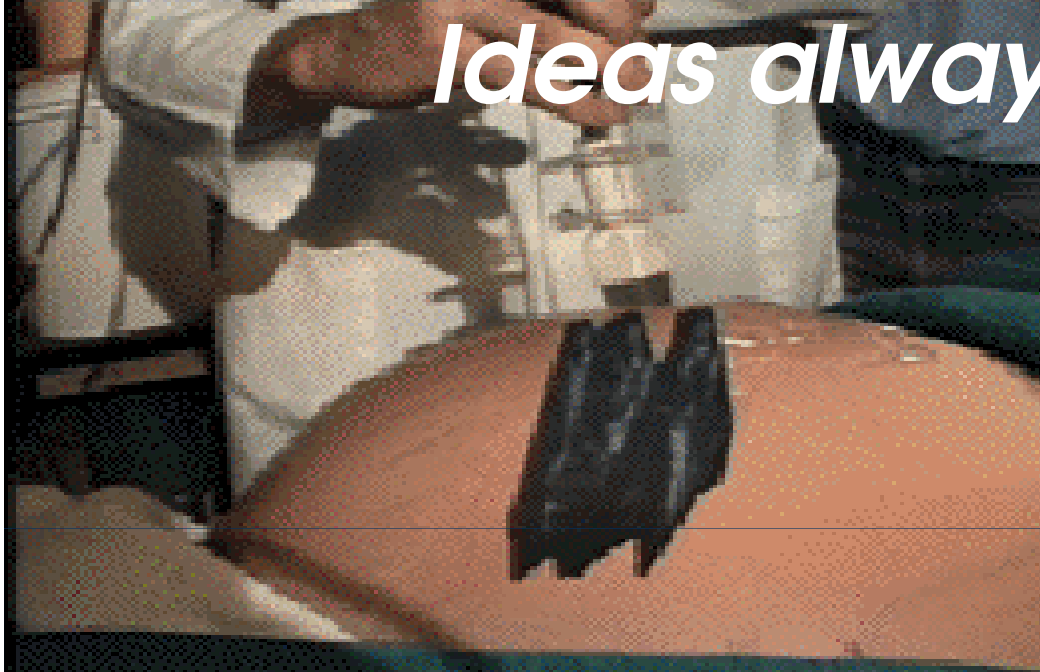
Original Design for the CAVE [Cruz-Neira et al., 1992]

The first Augmented Reality HUD



The term "Augmented Reality" also comes from 1992. Looking for new ways to help maintain Aircraft, Caudell and Mizell

Ideas always strikes twice



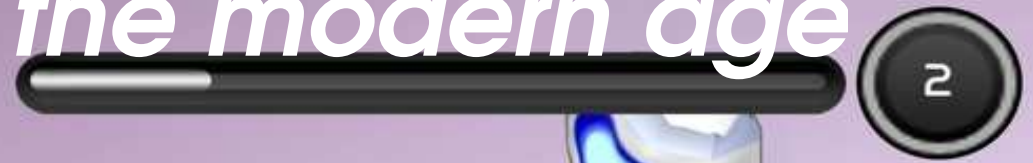
Independently that same year 1992 ultrasound Merging Virtual Reality with the RealWorld: Seeing Ultrasound Imagery within the Patient [Bajura et al., 1992] example of first real world use of AR application ultrasound 3.7. University of North Carolina at Chapel Hill)

Markers to connect the two worlds



ARToolKit was originally developed by Hirokazu Kato of Nara Institute of Science and Technology in 1999

Camera's begin the modern age



Markers less – new ways of seeing



Current AR Applications:



Current AR Applications:



Current AR Applications:



Current AR Applications:



Current AR Applications:

The screenshot displays an AR application interface. The central area shows a woman in a blue t-shirt and black shorts, standing in a virtual room. The room features a wooden pillar, a framed picture, and a chair with a green cushion. On the left side of the interface, there are several circular icons: a camera, a hand, a shopping cart, and a hand icon. The top right corner shows a 'My Items' section with four t-shirt options: blue, white, black, and green. Below this, a detailed view of a blue t-shirt is shown, labeled '#787424 Womens Baby Tee'. The description reads: 'With a unique cotton blend this form fitting tee feels better than your own skin. Available in 6 unique colors.' The price is listed as \$14.99, with a discount to \$7.99. A 'Quantity' selector is set to 1, and an 'ADD TO CART' button is present. The bottom right corner contains a 'Tools' section with options: 'Get Marker: Edit / Error / SMS', 'Set size: [S] [M] [L] [XL]', 'Motion Detection: [ON] [OFF]', and 'Take Snapshot: [ON] [OFF] [sec delay]'. The bottom of the screen features a video player interface with a red progress bar, a play button, and a timestamp of 1:08 / 1:55.

My Items

#787424 Womens Baby Tee

With a unique cotton blend this form fitting tee feels better than your own skin. Available in 6 unique colors.

Quantity: 1 \$14.99 \$7.99 ADD TO CART

Tools

Get Marker: Edit / Error / SMS

Set size: [S] [M] [L] [XL]

Motion Detection: [ON] [OFF]

Take Snapshot: [ON] [OFF] [sec delay]

My Snapshots

1:08 / 1:55

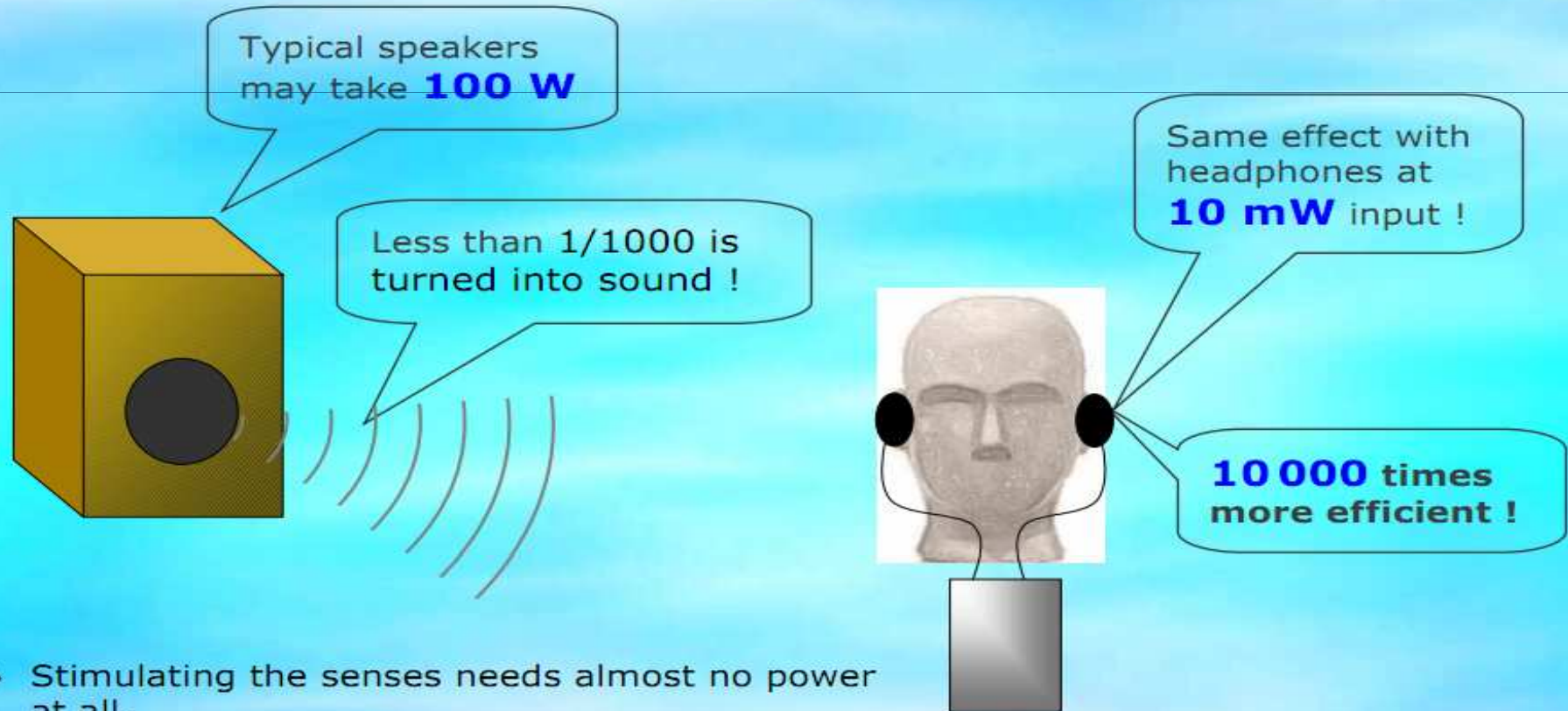
Current AR Applications:



An idea of the future

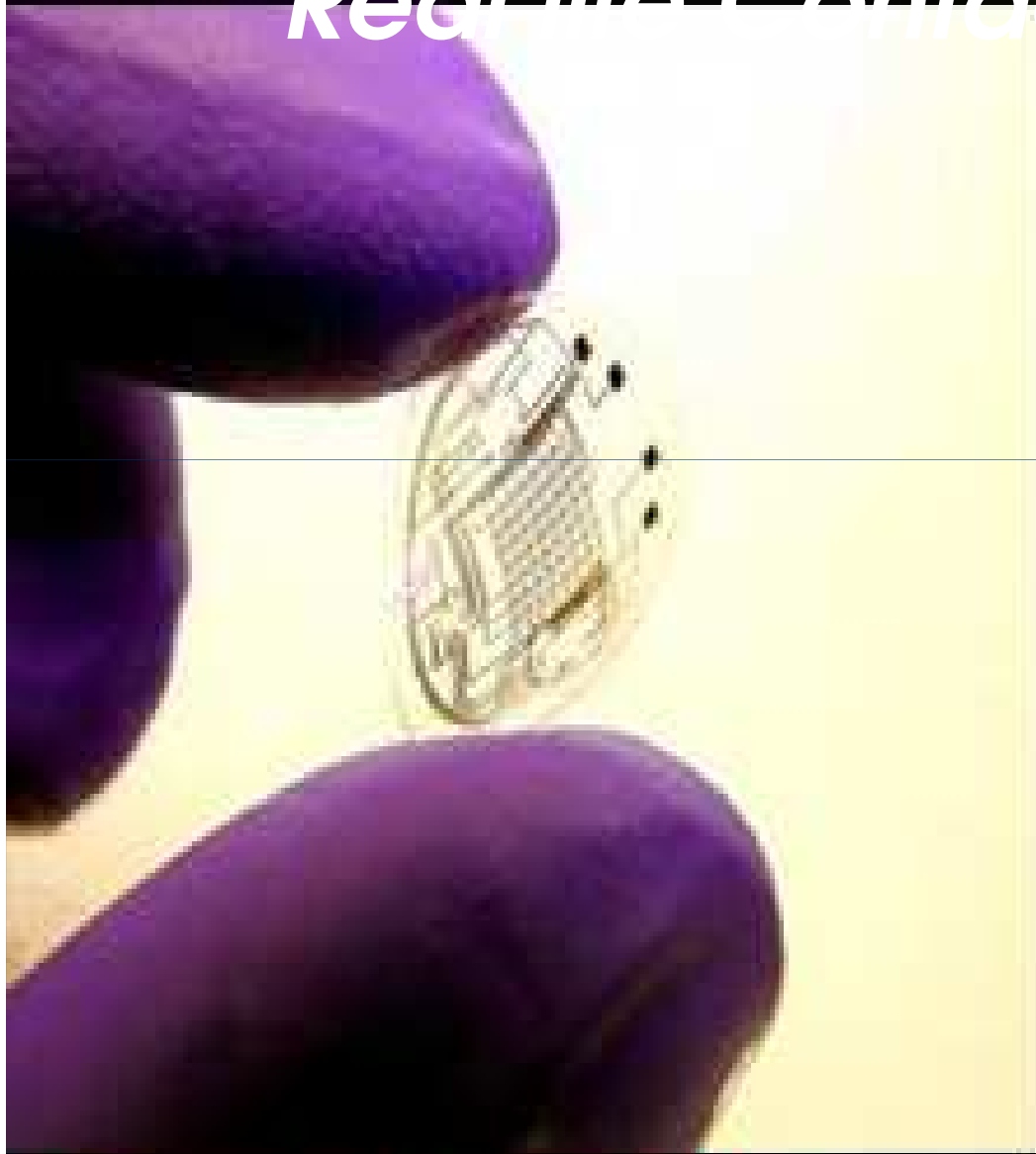
18

Sound

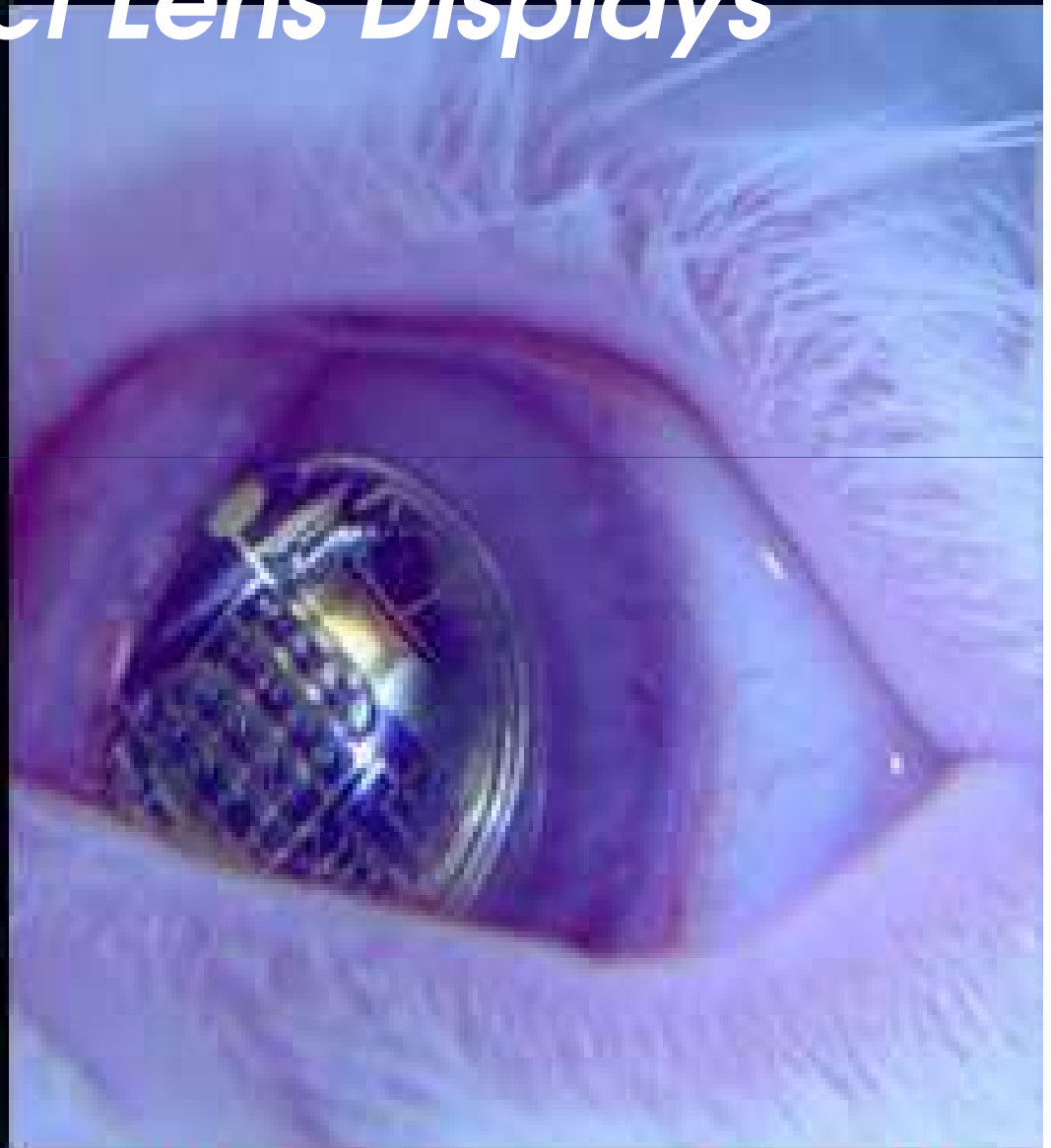


- Stimulating the senses needs almost no power at all.
- Most of the power consumption of advanced near eye displays will go into signal processing
- **Low power computing and signal processing will be an essential counterpart !**

Real Life Contact Lens Displays



A researcher holds one of the completed lenses.



Contact lenses with metal connectors for electronic circuits were safely worn by rabbits in lab tests.

In the mean time we could have this



A Virtual Reality Future ?



OR an Augment Reality Future ?



Our Choice



<http://www.theendofhardware.com/>

<http://gamesalfresco.com/>