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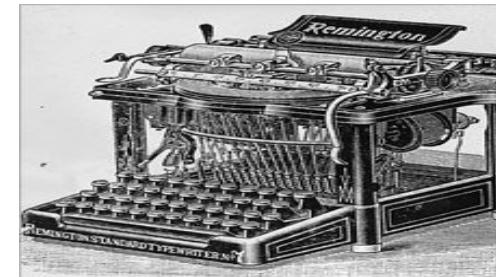
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# Beyond the controller



truna aka j.turner  
freeplay 2010



Christopher Sholes 1873 QWERTY keyboard



# Reasons for being?

- The fundamental goal of a larger game is to take you away to a wonderful place, and there let you do an amazing thing.
- Books and movies can't do that. They can take you away to a wonderful place, but they can't let you do an amazing thing. That's **the power of interactivity**. That's what makes this medium unique, and that's what makes it important. (Ernest Adams)
- A goal is total engagement with the game - **immersion**





# Child of Eden



Child of Eden Preview – Joystiq <http://www.joystiq.com/2010/06/19/preview-child-of-eden/>

# Full immersion?

- MS announce the “Natural User Interface”
- “*What Microsoft considers revolutionary about Kinect—and they do consider it revolutionary—isn't that it tracks your body with full depth mapping, or responds to voice commands, or that it has a standard video camera: It's that it brings all of three of those things together for the first time. It's **natural user interface** in its infancy*” (Buchanan & Johnson 2010)
- Body as joystick?



# Gameplay and interaction

- The interface is the gameplay (Jesper Juul)
- The interface includes the control system
- Scenarios of use?
  - Games are all about FUN
  - Games are played within the frame of the screen

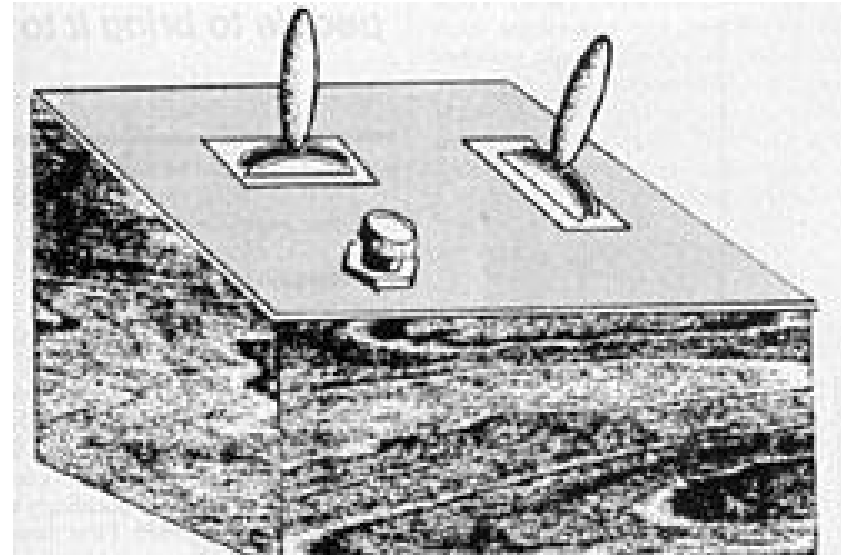


Paper boy Atari (1984) Dead Space extraction (2009)



# Legacies

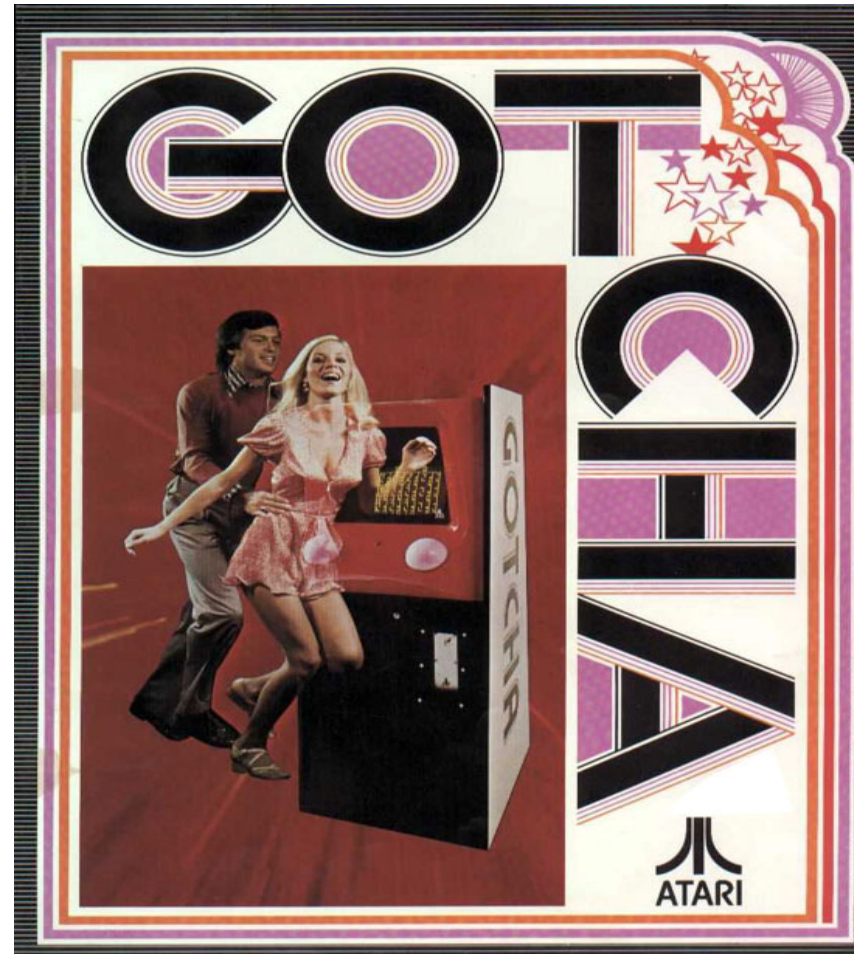
- the translation of human will into machine movement via a single stick may be one of the most overlooked achievements of the last 100 years (Zeller Jnr 2005)



Spacewar! Control box (1962) Tennis for two control boxes 1958

# prosthesis

- Artificial device used to replicate / replace a missing body part or body mechanic
- Controllers are prosthetic devices for game worlds
- They are designed for specific world mechanics



Gotcha Atari 1973





# prosthesis

- Actions embedded in the controller
  - Movement –into the screen
  - Actions - strike



Boong-Ga Boong-Ga TaffSystem (2001)



# design

- Abstract (generic)
  - Enable core mechanics
  - Adaptable to multiple games
- To specific RL devices



Amiga Joyboard (1982) Dreamcast fishing controller  
Samba de Amigo Maracas  
Nintendo Light Gun  
Wii Baby  
Resident Evil chainsaw



# Design concept

- Empiricist – knowledge is derived from experience
- Empiricism emphasizes the role of experience and evidence, especially sensory perception, in the formation of ideas.
- “I am holding a fishing rod – this is fishing”



What excitement, you say? You know, all that casting and waiting. It's fishing without all the mess, flies, dead fish, sunburn and feeling of accomplishment. ([Gizmodo](#))







1936 Seeburg Ray-O-Lite

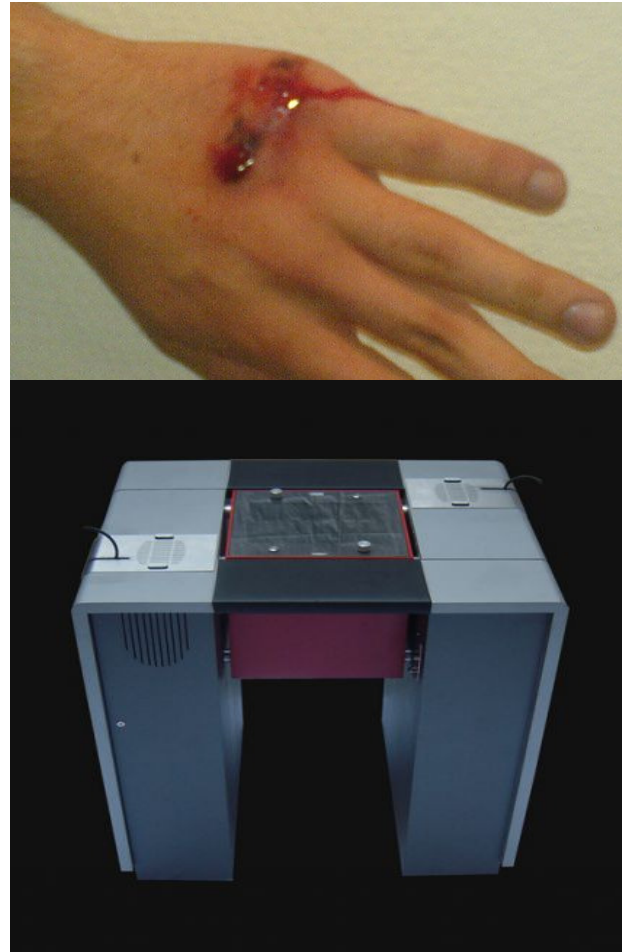
# Un-natural interface

- To further build the tension, the MPAR dictates that hiding is accomplished by pressing a diverse selection of the Sixaxis's buttons and triggers simultaneously, which clearly puts a strain on the player's hands. ([Edge 2008](#))



# Sensory reality

- I for one am working on a design document for an interactive-storytelling extravaganza, provisionally entitled *Chubby Drizzle*, which will be packaged with a £150 peripheral that you attach to the ceiling above your sofa and connect to a nearby tap. The game will then squirt cold water down on you while you are playing, so you feel that you really have entered a world where it is always raining. ([Steven Poole](#))



The artwork formally known as [Painstation](#)



# You have the power



## POWERPLAY.

**ATARI** **COLECO** **Intellivision** **INTELLIVISION**  
[OrphanVideoGames.com](http://OrphanVideoGames.com)

The Power Glove. You plug it in like any joystick. But the similarity stops there. Because now you don't just guide the action. You're in the action. As soon as you put on the Power Glove, its 3-D sensors track the position of your hand in space. You enter the program code. Calibrate the glove. Center it. And feel the mechanical moves of a joystick give way to free-flowing, instant response. You actually knock out Mike Tyson. Grab the steering wheel of Rad Racer. Bank and fire your P-38 in 1943 "The Battle of Midway. All simply by moving your hand. The Power Glove has a unique programmable keypad that gives the best NES' players moves they've never had before—and never will have with a joystick. Twist your wrist for an immediate head butt in Double Dragon. Bend a finger for "Thrash Mode"—your character turns and shoots in all possible directions. Bend another for "One-Shot Turnaround"; you automatically change direction and fire faster than you ever could with a joystick. With new moves at your disposal, it makes your joystick games especially vertical scroll games, new. Different. More exciting. And that's only the beginning.



NES Power glove (1989)

# design

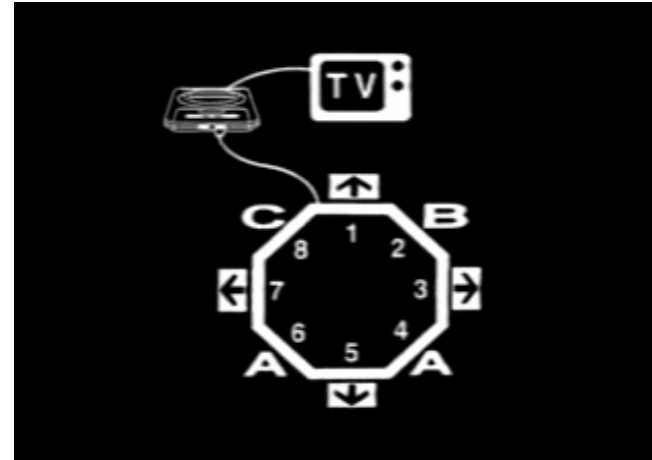
- Body contortion:
- Physical enactment within RL space affects virtual space
- “get involved in a video game, not just with hand eye coordination but with your whole body”
- You ARE the controller! – [instructional video](#)
- Demo on [The home Show circa 1993](#)



Sega Activator (1973) U-Force (1989)

# Design concept

- Make it feel “real” by allowing player agency
- Realistic peripherals add concrete “reality” – eg less need for suspension of disbelief
- Attempt to make the fourth wall permeable
- PRAGMATIC – focus on the human doing
- Doing what is a question?





# Assumptions?

- Videogame genres: games are defined in terms of their GAMEPLAY – core interaction mechanic
- FP Rail Shooter:
  - No player camera control - moves into the screen along the Z-axis
  - Shoot stuff
- In recent months I have transformed into an exiled Florentine nobleman thirsty for vengeance in Renaissance Italy; I masqueraded as a continent-hopping, chiseled chunk of vainglorious derring-do in search of lost treasure; and I traveled the western wilds of the United States as a battle-scarred loner fighting to restore his dignity and return to his family. [ ] In each game, the protagonist -- my avatar -- is a mass murderer.
- Perhaps this is an unfair choice of words. After all, the moral compass of these men points true. But no man in the history of our real world has more bodies on him than Ezio Auditore, Nathan Drake, or John Marsten\*. The cold fact is, these guys are efficient and prolific killers. (McDevitt 2010)



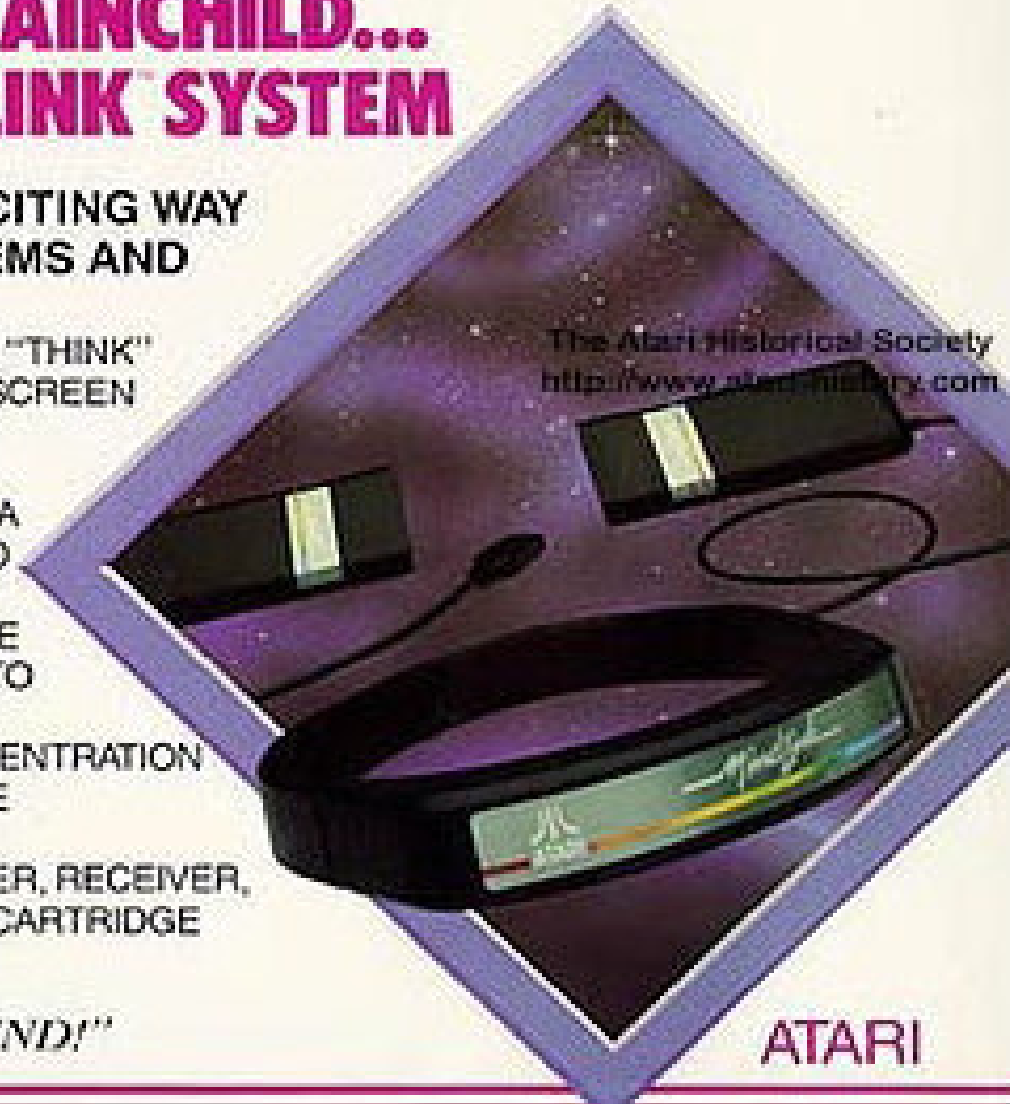
Ikaruga SEGA (2001) Perfect Cherry Blossom – Team Shanghai (2003)

# OUR NEWEST BRAINCHILD... THE ATARI MINDLINK™ SYSTEM

AN ENTIRELY NEW AND EXCITING WAY  
TO USE ATARI GAME SYSTEMS AND  
COMPUTERS:

- PLACED AROUND FOREHEAD, YOU "THINK" THE MOVEMENT OF OBJECTS ON SCREEN
- WORKS ON EMG TECHNOLOGY — (MEASURES MUSCLE ACTIVITY)
- TRANSMITS TO GAME CONSOLE VIA INFRARED REMOTE CONTROL — NO WIRES ATTACHED
- EXCITING, VERSATILE, EXPANDABLE
- OPENS UP ENTIRELY NEW AREAS TO VIDEO GAMING
- REWARDS RELAXATION AND CONCENTRATION
- INCREASES COMPUTER AND GAME SYSTEM INTENT TO PURCHASE
- INCLUDES INFRARED TRANSMITTER, RECEIVER, HEAD BAND AND ONE SOFTWARE CARTRIDGE

***"THE STATE OF THE ART  
FOR THE STATE OF YOUR MIND!"***



Atari Mindlink (1984 \*)

# Rationalist design?

- Play games by thinking about them?
- Emotiv Epoc headset: You think therefore you can
- *“even virtual-reality systems deny the importance of engaging the senses in the physical world. One of the more extreme aims of virtual reality is to present sense data “directly to the brain,” circumventing the body's normal engagement in the physical world.” (Coyne 1997, p29)*

EPOC Headset  
\$299.00

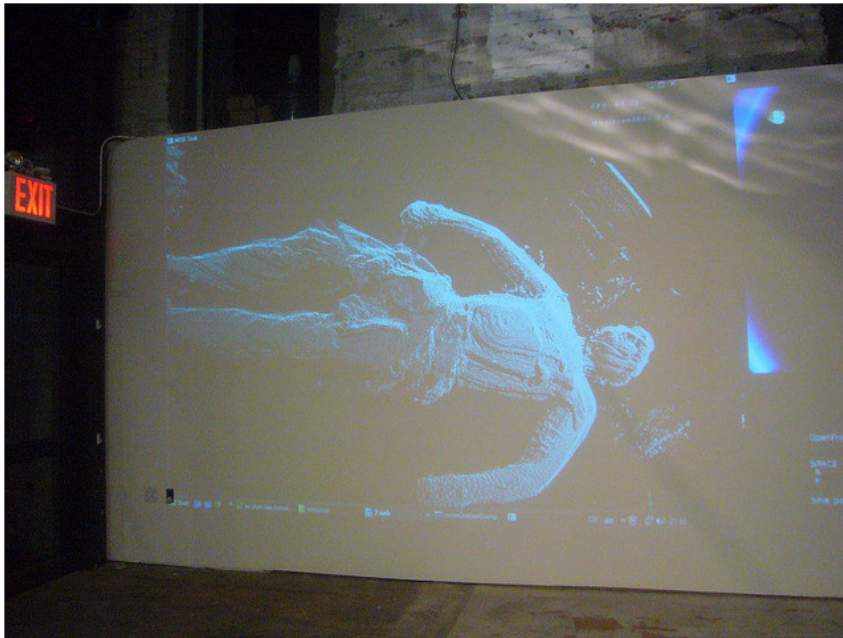


Emotiv headset and [mind control pong](#)





# legacies



Friedrich Kirschner's INKSCANNER – performance @ Eyebeam:

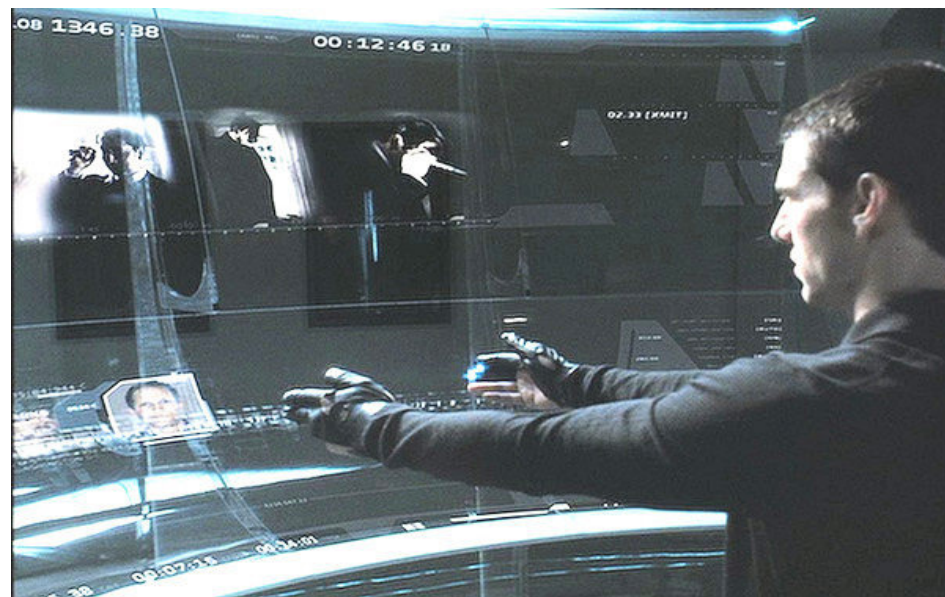
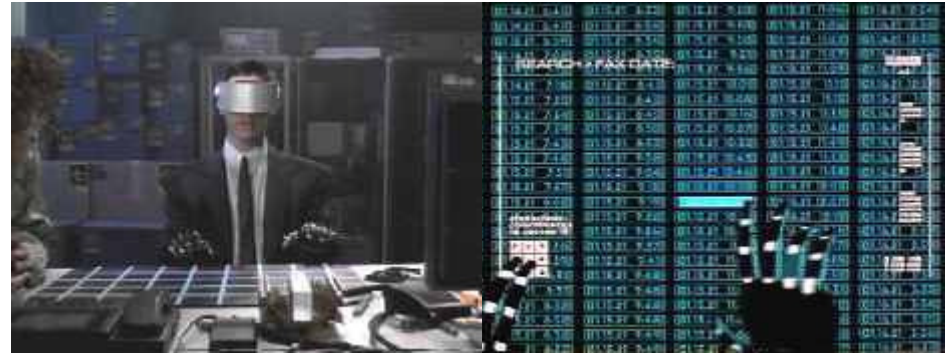
<http://inkscanner.moviesandbox.net/>



Live performance – puppenspiel <http://puppenspiel.moviesandbox.net/>

# Control?

- Technology as prosthesis – designed artefacts that enable interaction in a virtual world
- Technology as the dream of virtuality – mind-ware
- IN each instance the controller DICTATES the form of interaction





# Autocratic design?

- K: Kiryu is fighting all the time. He's gotta be a fucking idiot. No yakuza is going to run around getting into fistfights like that. Especially not an executive type. He'll wind up in jail or in the hospital or dead, maybe even whacked by his own people for being a troublemaker. These days, he'd probably get kicked out before even going to jail. Guys like that start gang wars and nobody wants that now. When a yakuza gets into a fight, it's serious business. [[Yakuza 3 reviewed by Yakuza](#) – Jake Adelstein Boing Boing 2010]





# Possibilities are constrained



# Nature of the beastie

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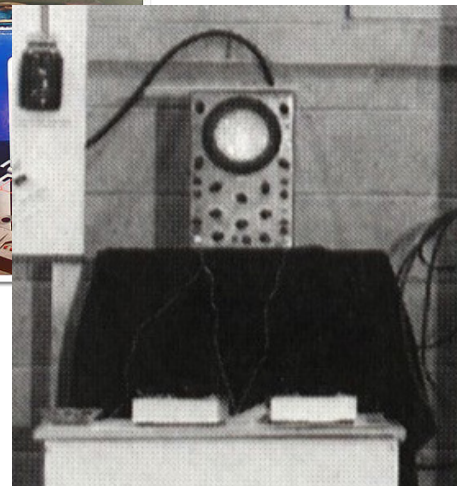
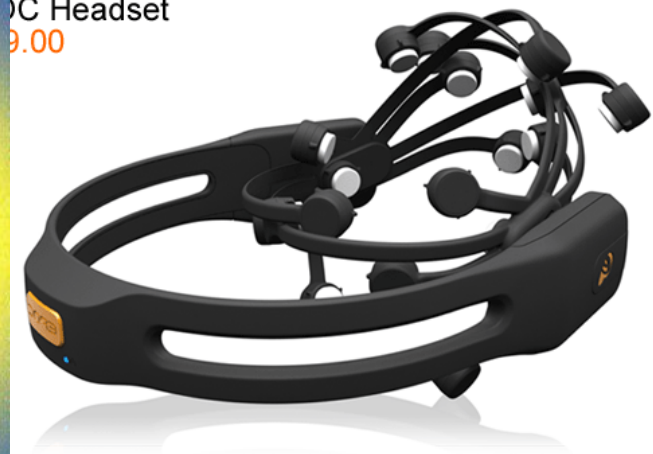
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OC Headset  
9.00



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