Chapter 2.2

Multimedia Future Direction

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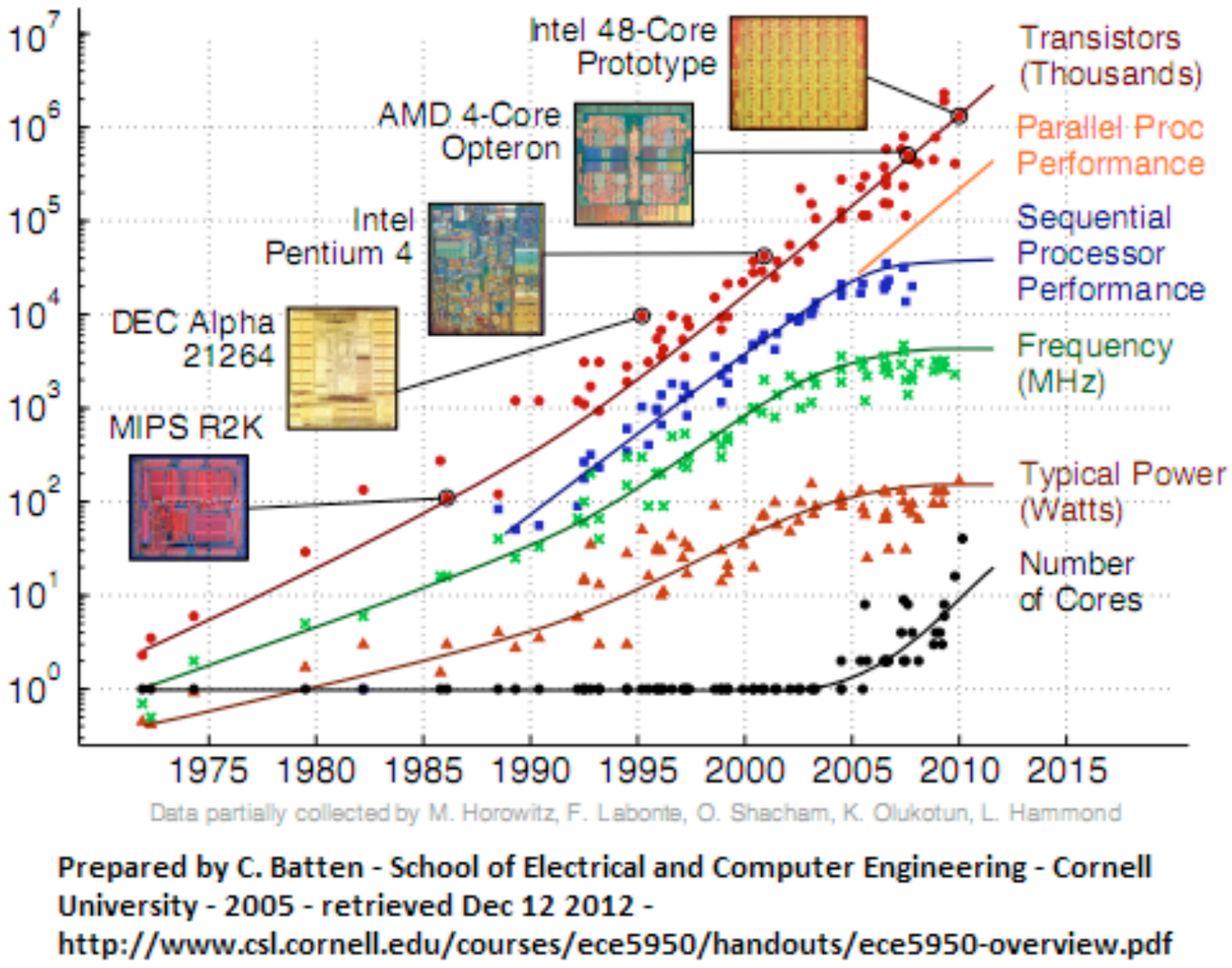
Contents

- Processors
- Displays: 3DTV, Free-viewpoint TV
- Nano-Computing
- Computing without Keyboards
- Wearable Computing and Future Devices

PEOPLE WHO ARE CRAZY ENOUGH TO THINK THEY CAN CHANGE THE WORLD ARE THE ONES WHO DO.

Steve Jobs | http://www.apple.com



Prepared by C. Batten - School of Electrical and Computer Engineering - Cornell University - 2005 - retrieved Dec 12 2012 - http://www.csl.cornell.edu/courses/ece5950/handouts/ece5950-overview.pdf

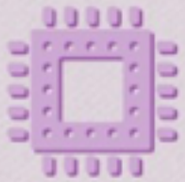
High Speed Processing

High-speed processor ability is important to cater the steady demand for more capability of computer memory.

THERE ARE DIFFERENT

KINDS OF PROCESSORS

CPU



The central processing unit, or CPU, first introduced in 1978.

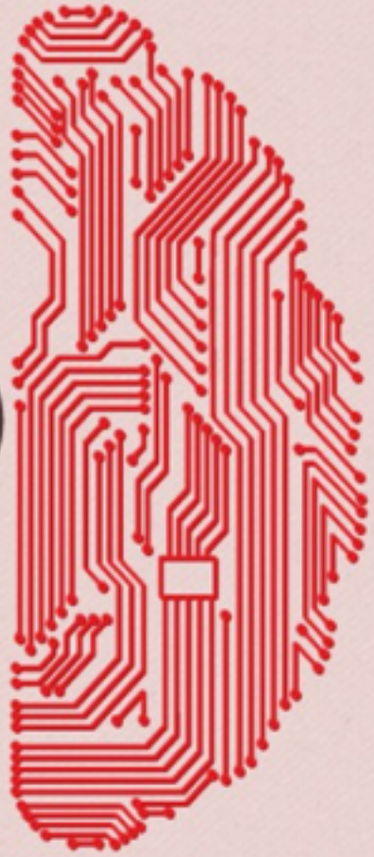
A CPU IS LIKE THE LEFT BRAIN

ANALYTICAL/LOGICAL
NUMERICAL COMPUTATION

GOOD FOR:

SPREADSHEETS

DATABASES



GPU

The graphics processing unit, or GPU, first introduced in 1999.

A GPU IS LIKE THE RIGHT BRAIN

CREATIVITY, ARTS, EMOTIONS
AND VISUAL ATTENTION

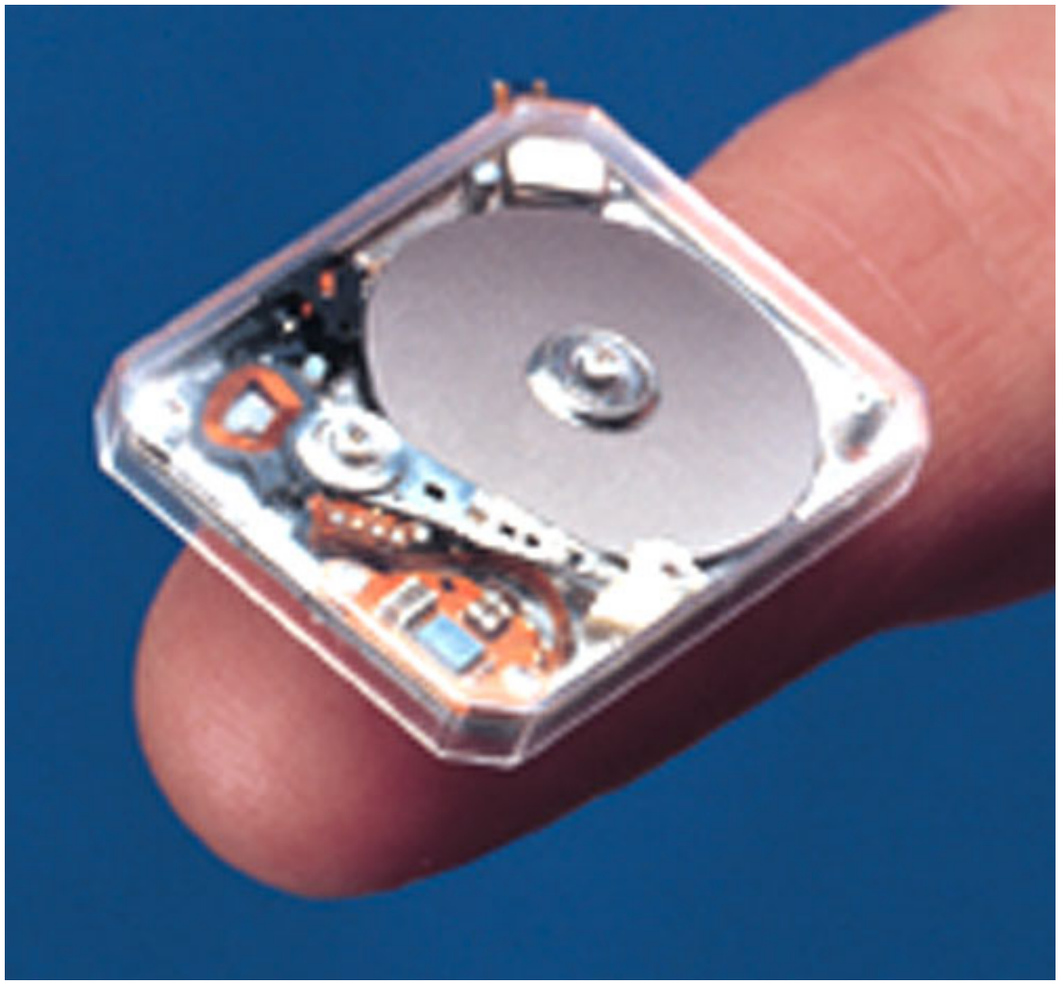
GOOD FOR:

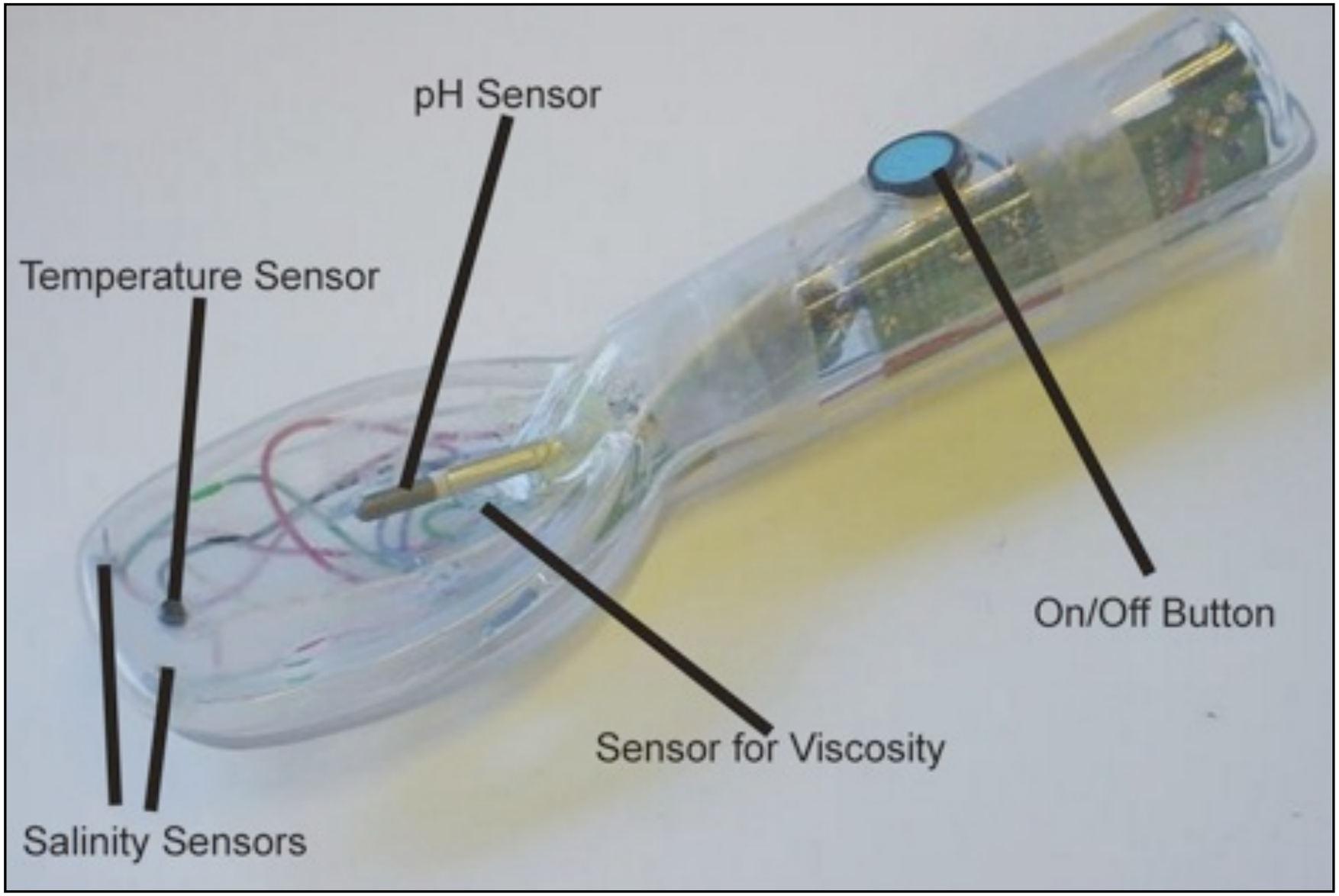
WEB BROWSING

GAMING

Computing Power

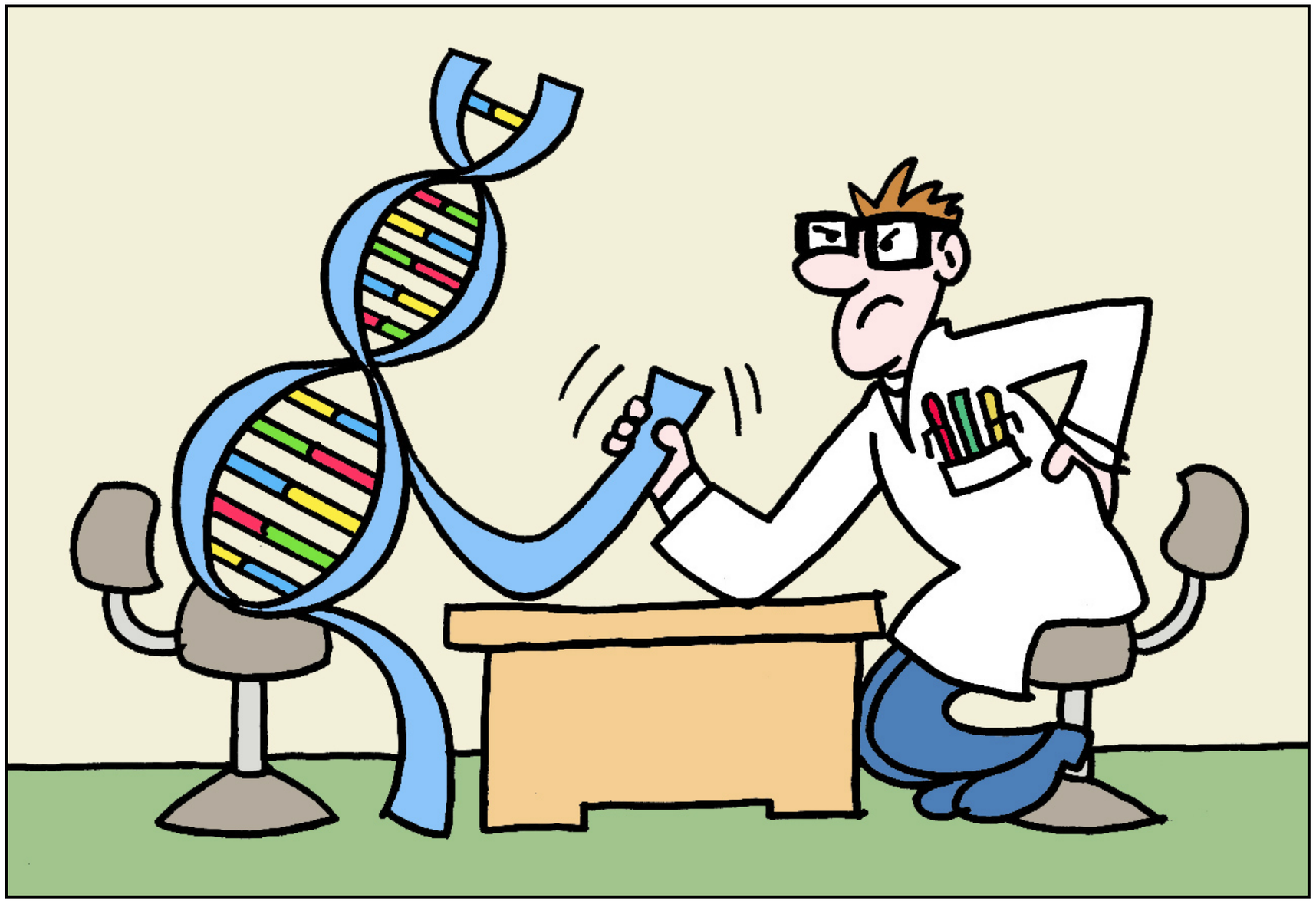
World's smallest hard disk drive, 0.85 inch device with a 4 GB capacity!





Super-Intelligent System

In the future more super-intelligent systems and products will be available even in your homes.

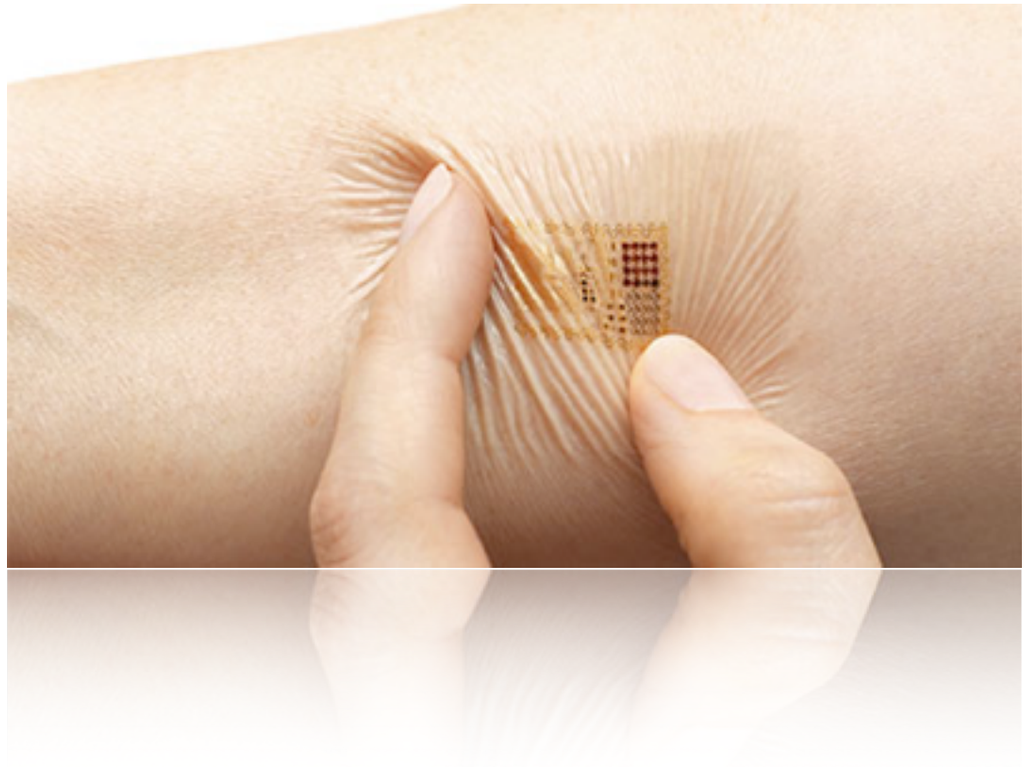


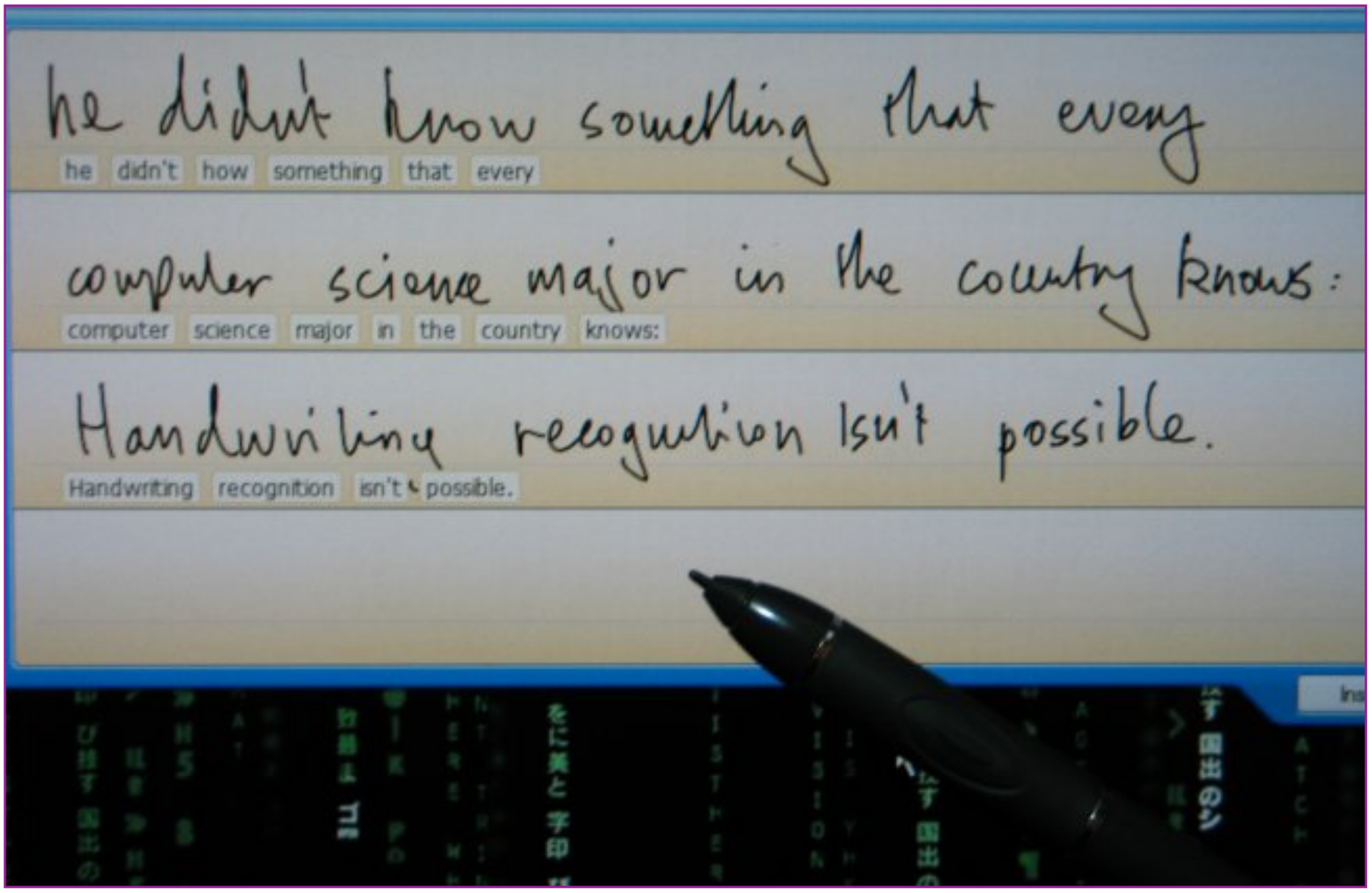
Genetic and Evolutionary Computation

Evolutionary computation is a subfield of computational intelligence that is inspired by biological mechanisms evolution.

Nano-Computing

Nano-computing emerged from nano-science and nano-techology.





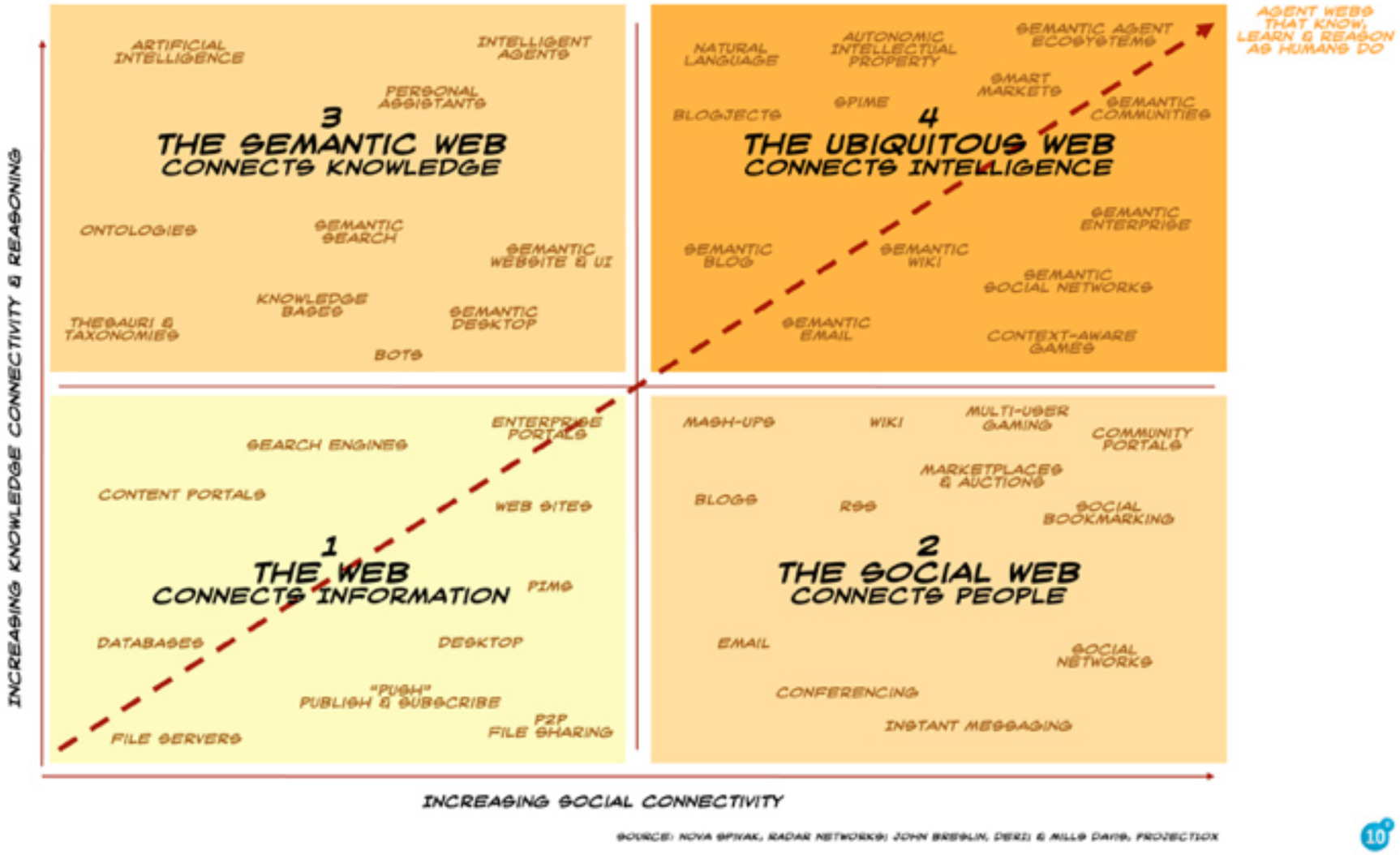
Computing Without Keyboard

Laser technology will replace the computer keyboard

Computing without Keyboard

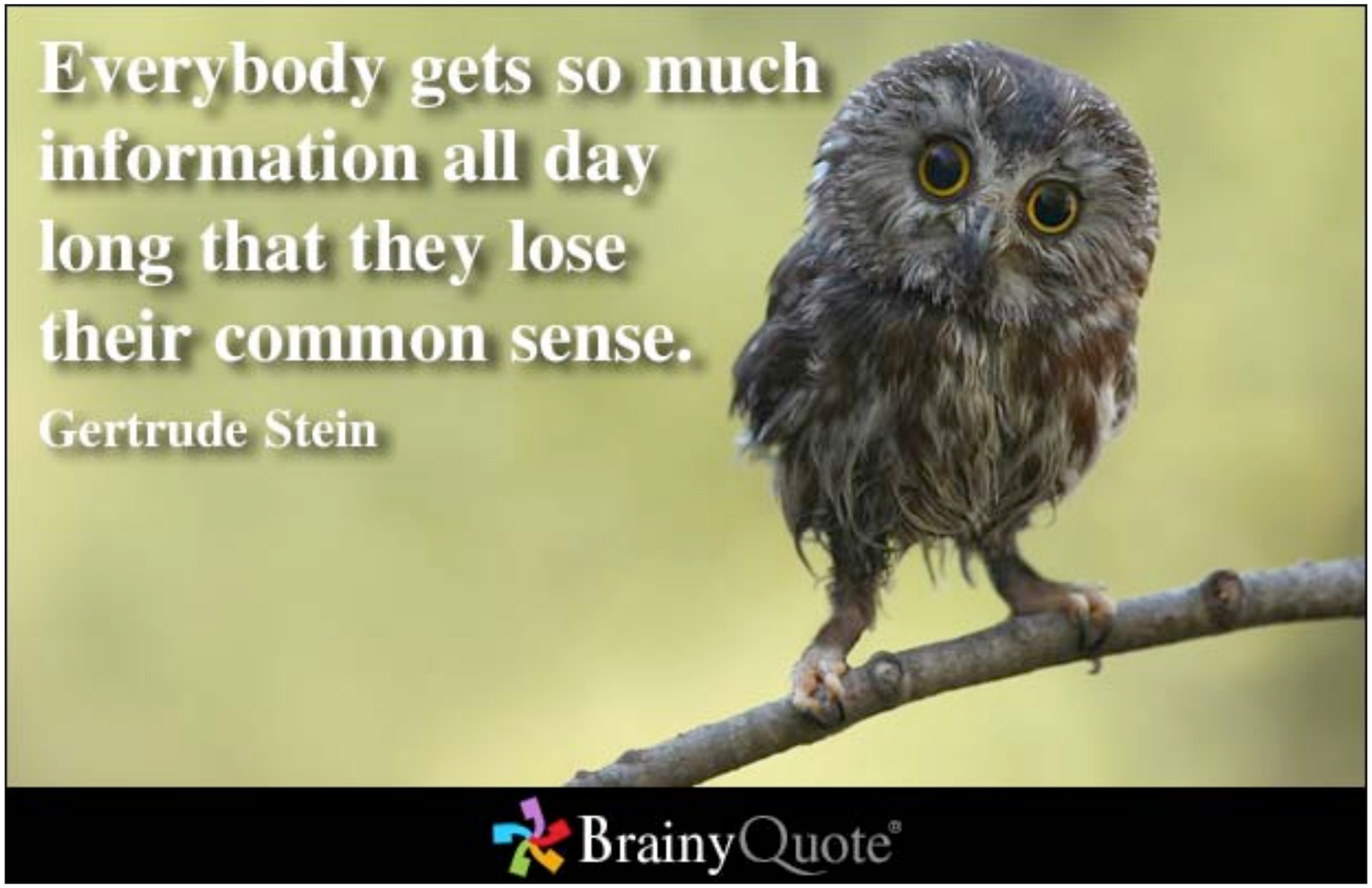
Laser Projection and Keyboard

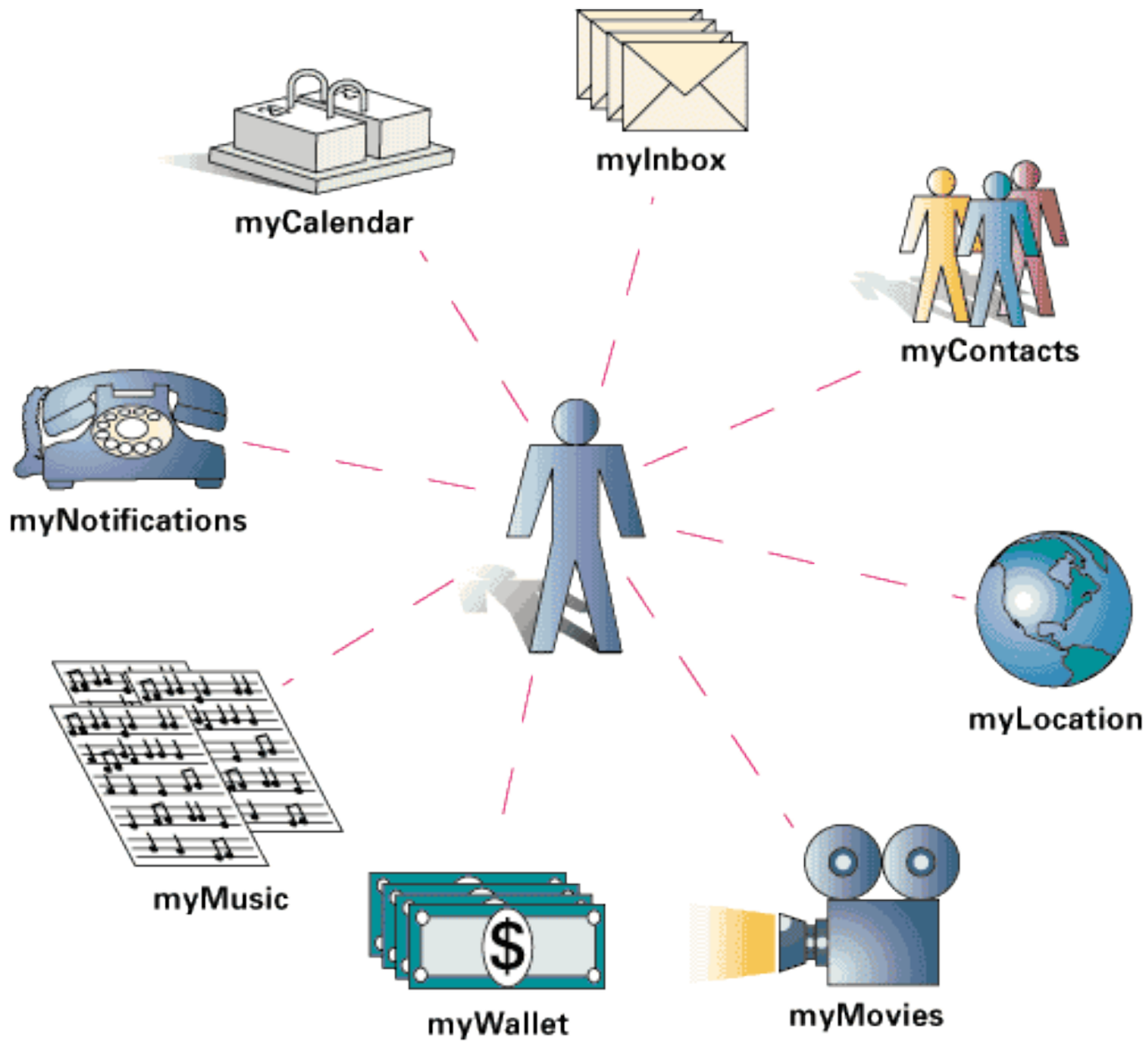
What is the evolution of the internet to 2020?



Web 4.0

Web 4.0 is the fourth decade of the advancement of the Web.


Everybody gets so much information all day long that they lose their common sense.
Gertrude Stein
BrainyQuote

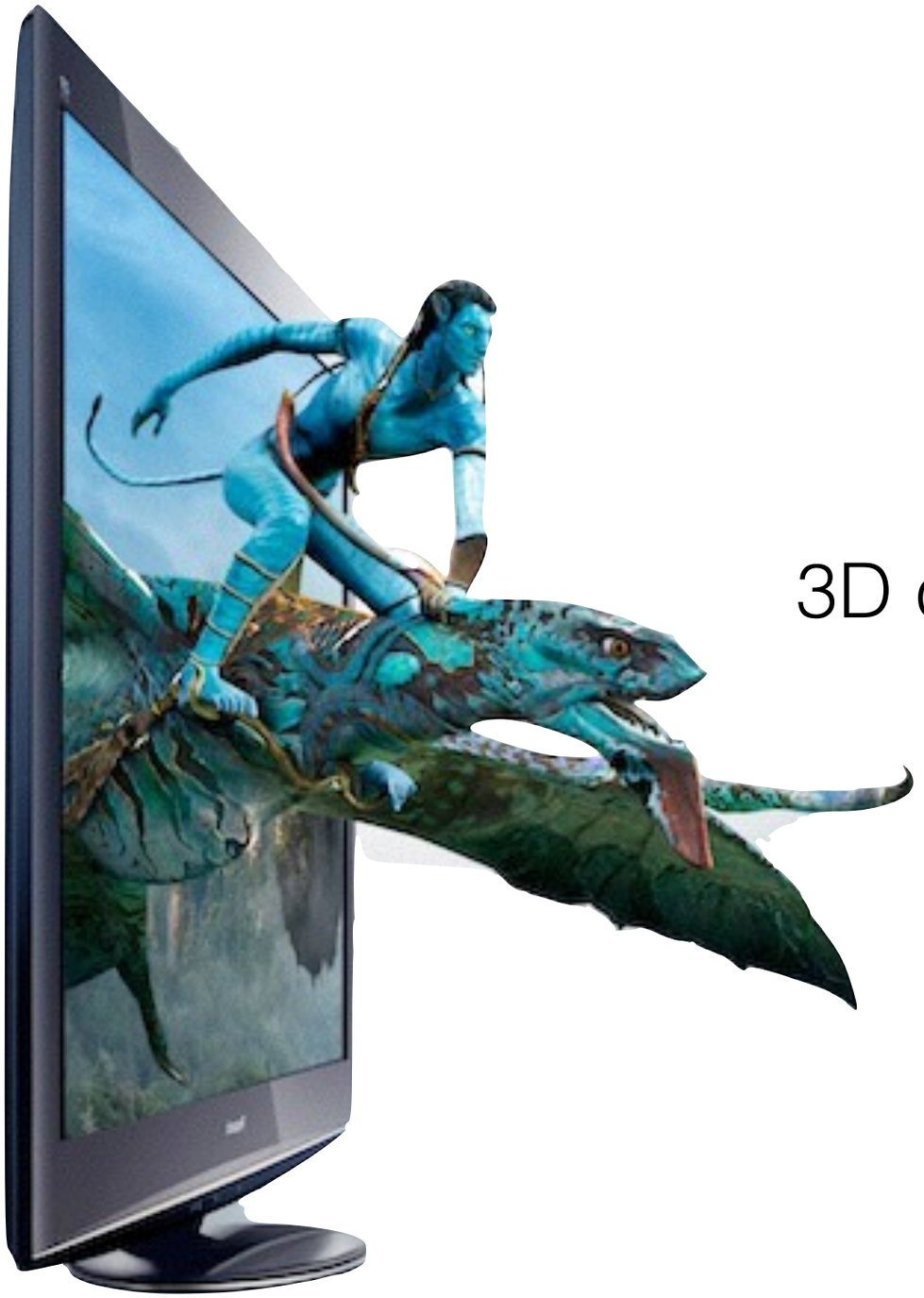


Pervasive Computing

Pervasive computing allow connectivity anytime, anywhere.

Flexible Screen

A flexible display is a display which is flexible in nature; differentiable from the more prevalent traditional flat screen displays used in most electronics devices.

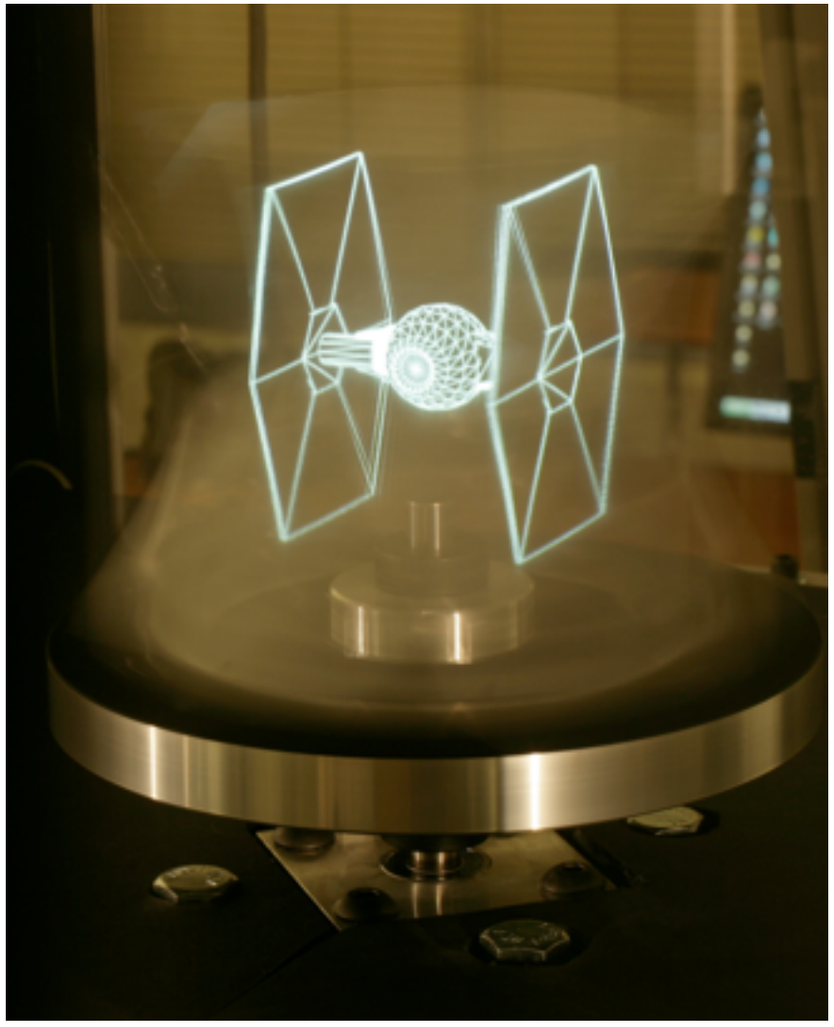


3DTV

3D depth impression of the observed scenery

Autostereoscopic Displays

Without wearing 3D glasses!



3D Displays

Motion Controller

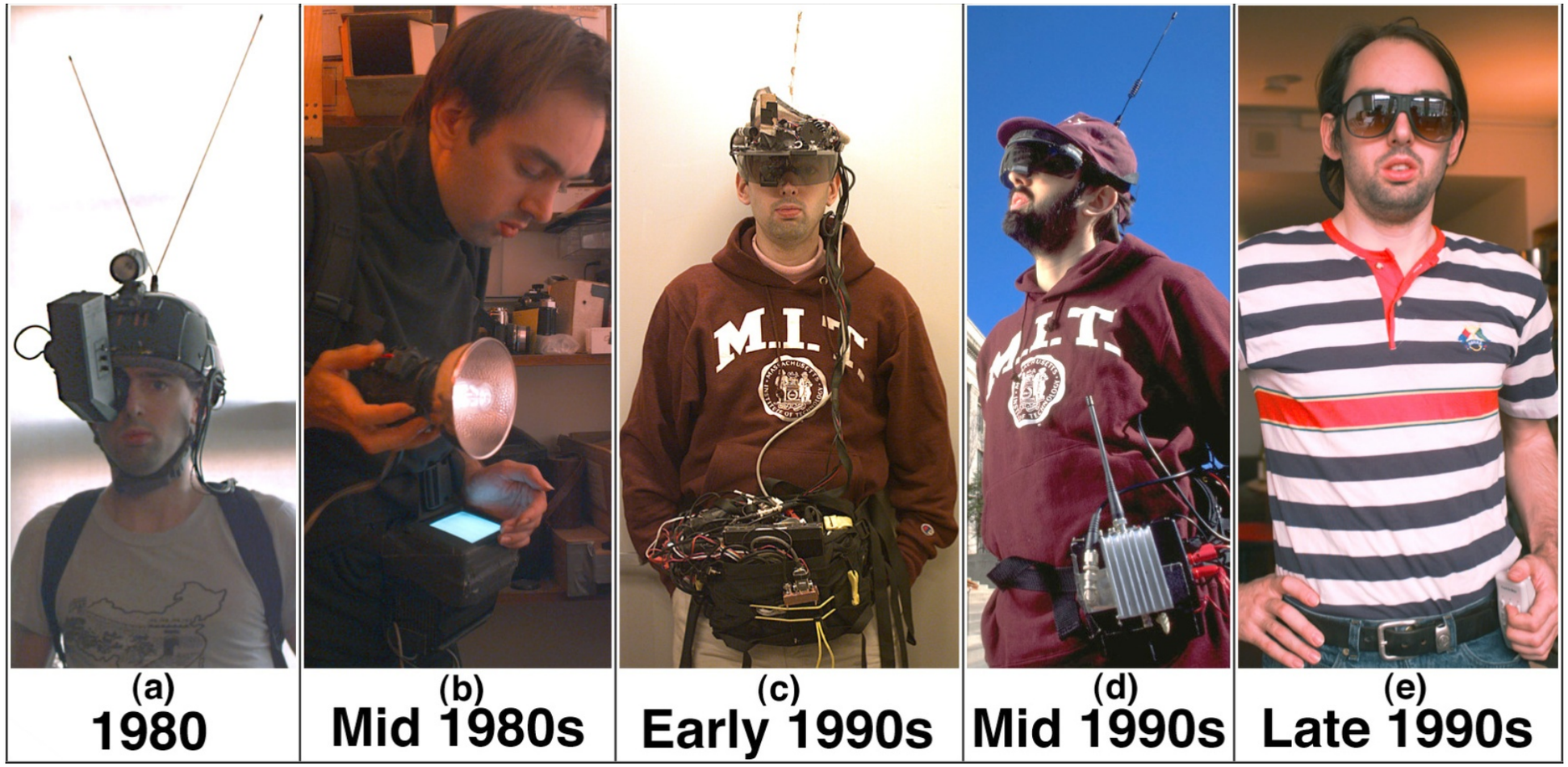
Controlling by using gesture

Motion Controller

Minority Report

Wearable Computing

Wearable computing technology makes you to be able to “wear” your computers.



Wearable Computing

Smart Watch

A mobile device with a touchscreen display, designed to be worn on the wrist.
It keeps you constantly updated without you having to whip out your smartphone.

Augmented Reality

Augmented reality generates an extended virtual scene

Augmented Reality

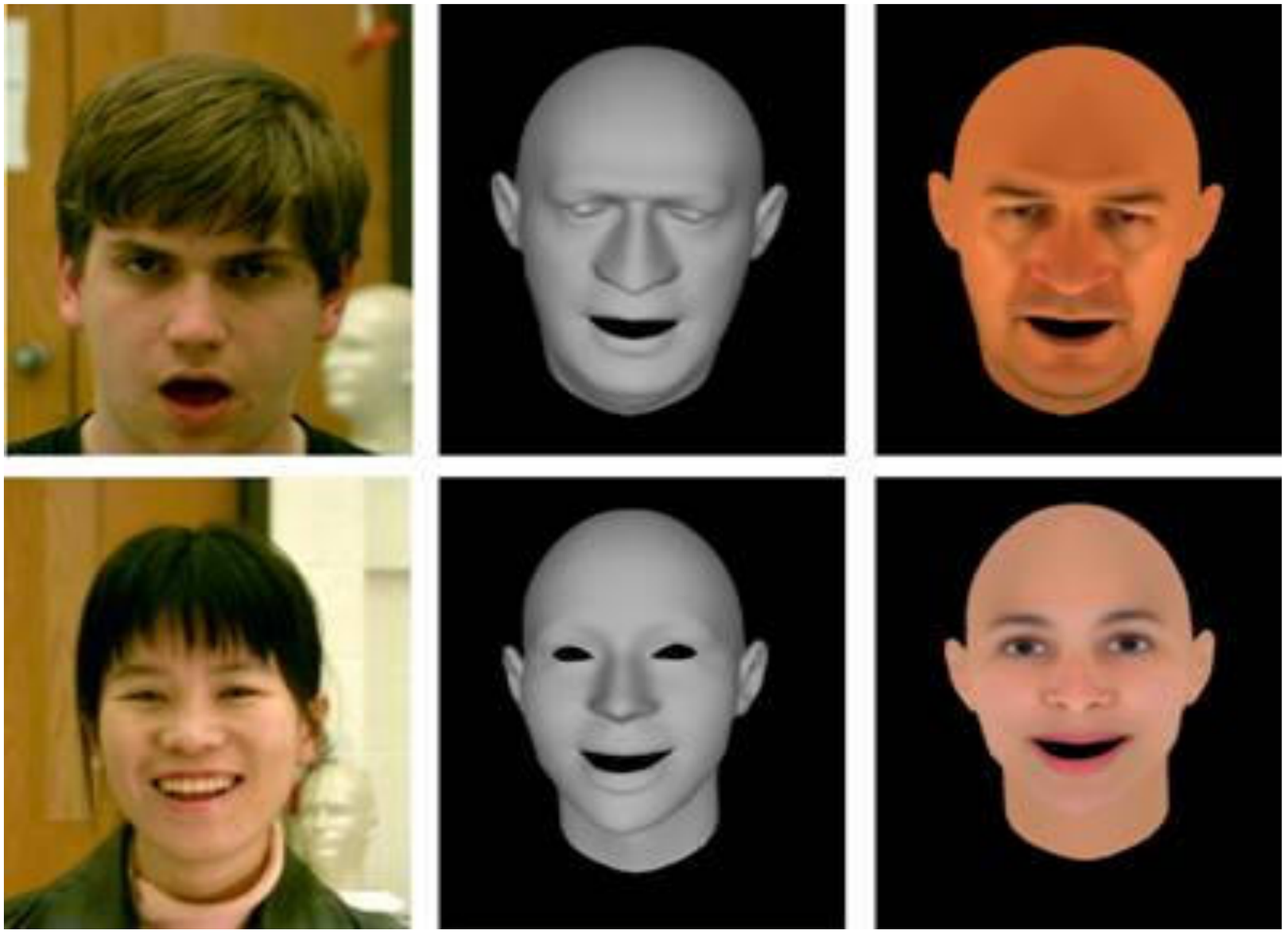
Iron Man

Google Glass

Google Glass is a wearable computer with an optical head-mounted display (OHMD). It was developed by Google with the mission of producing a mass-market ubiquitous computer. Google Glass displays information in a smartphone-like hands-free format.Wearers communicate with the Internet via natural language voice commands.

Next-Gen Virtual Reality

The Oculus Rift is a new virtual reality headset that lets players step inside their favourite games and virtual worlds.

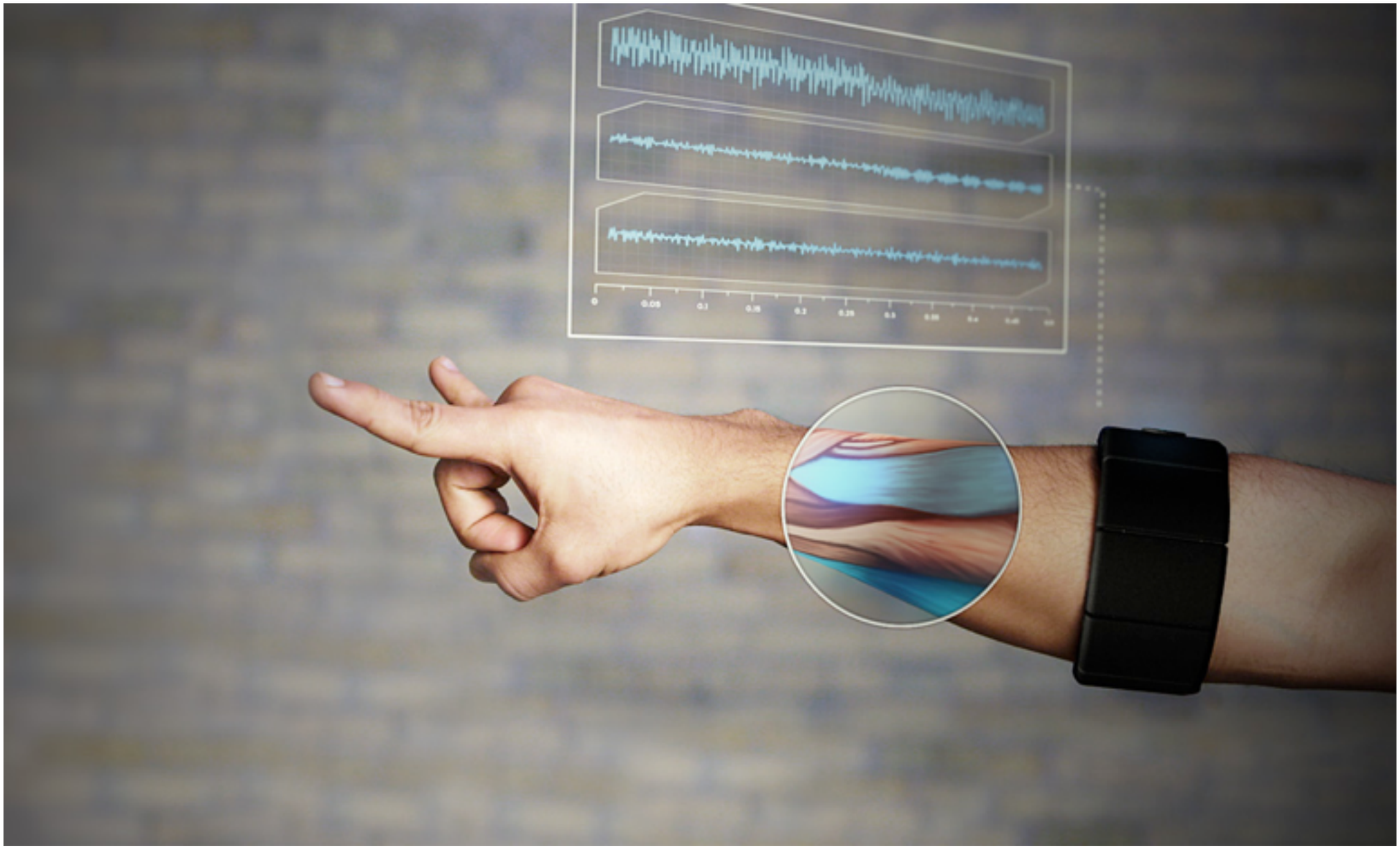


Natural Human Computing

Human computing makes computers as natural as possible.

Surface Computing

Surface computing allows you to touching the glass screen.



Gesture Control Armband

The armband lets you use the electrical activity in your muscles to wirelessly control your computer, phone, and other favourite digital technologies. With the wave of your hand, it will transform how you interact with your digital world.

3D Printing

3D printing or additive manufacturing is a process of making three dimensional solid objects from a digital file. The creation of a 3D printed object is achieved using additive processes.

3D PRINTING
REVOLUTIONISING
the
CLASSROOM

3D Printers have actually been around for about 25 years. Barriers like costs are breaking down, so they are now very affordable and easy to use.

3D Printing has caught the attention of educators who are looking into ways to incorporate it into the classroom.

Using 3D Printers in the classroom could mean:

Biology students can study cross-sections of hearts or other organs.

Chemistry students can print out complex molecules to study.

Engineering students can print modified car or robot parts.

Geography students can print out topography, population or demographics of an area.

Graphic design students can create prototypes of product designs

Food Technology students can design molds and cookie cutter templates

Design and Engineering students can make prototypes of their creations.

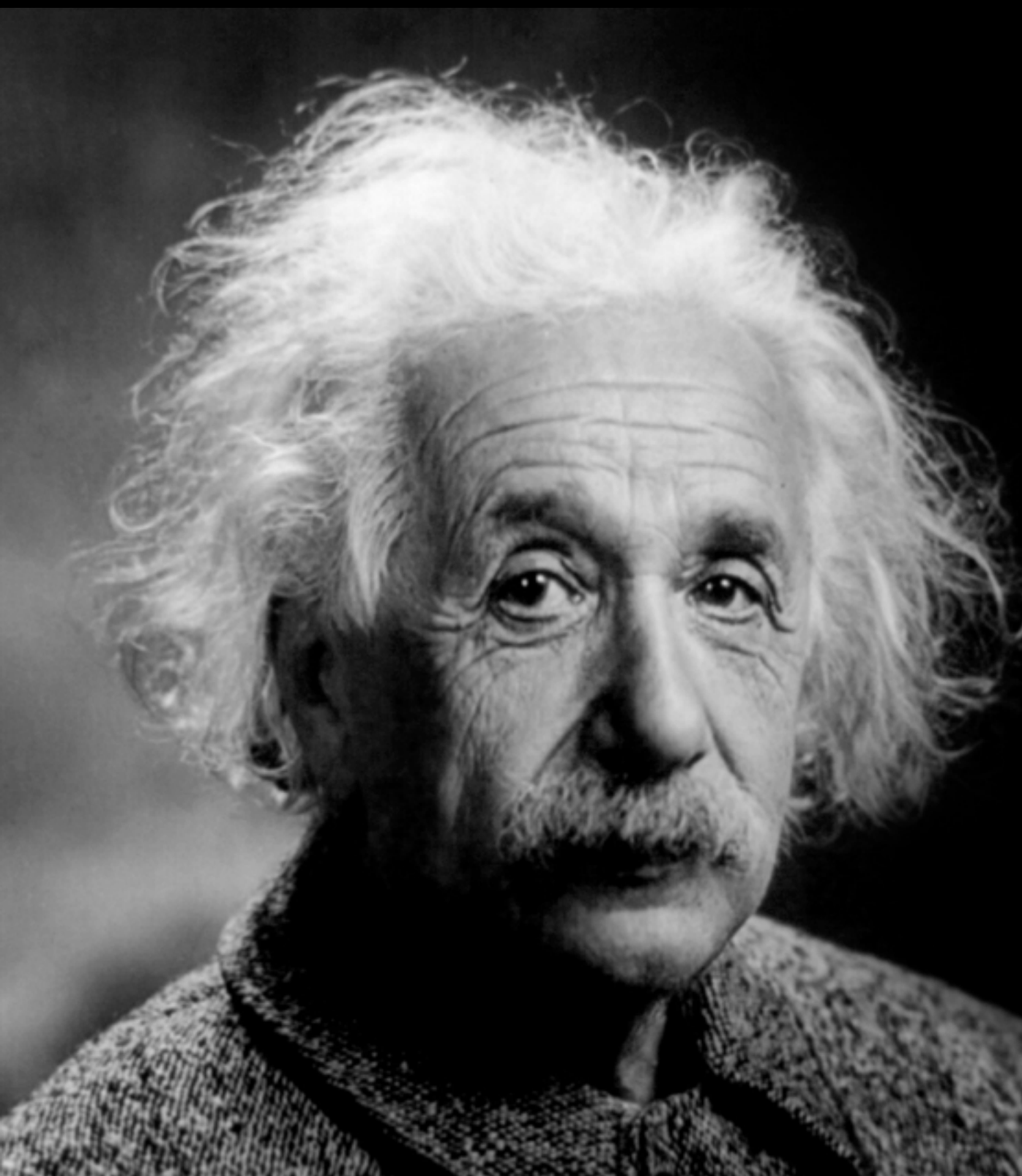
Architectural students can print new or existing designs.

History classes can print artifacts for closer examination

3D PRINTING SYSTEMS
Unleash your creativity

“It has become appallingly obvious that our technology has exceeded our humanity.”

–Albert Einstein



“I fear the day that technology will surpass our human interaction. The world will have a generation of idiots.”

Albert Einstein