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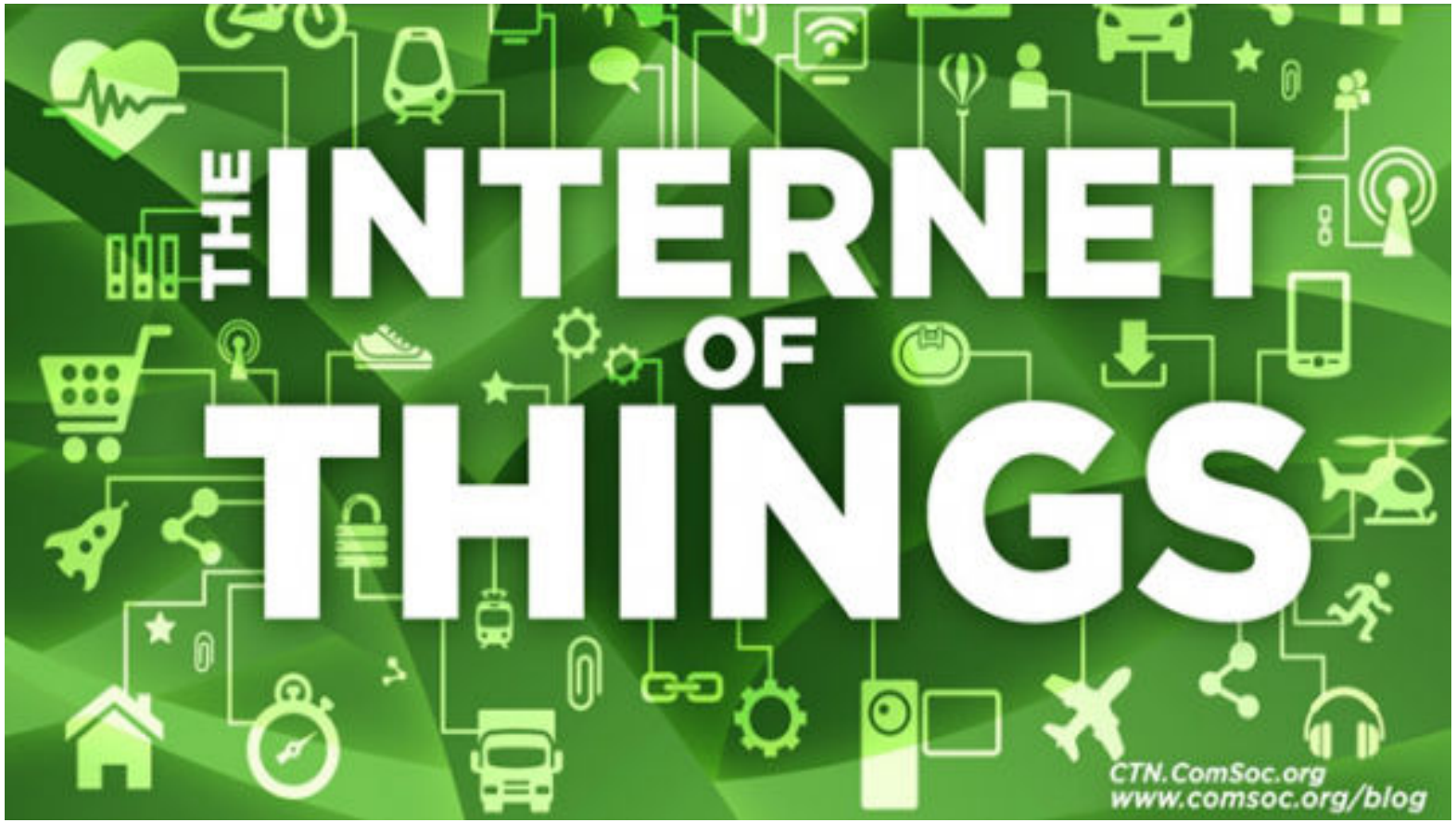
Unitec Institute of Technology
TE WHARE WĀNANGA O WAIRAKA

She#

http://shesharp.co.nz


THE INTERNET OF THINGS
CTN.ComSoc.org
www.comsoc.org/blog

IN 60 SECONDS...
1 NEW DEFINITION IS ADDED ON urban
1,600+ READS ON Scribd
13,000+ HOURS MUSIC STREAMING ON PANDORA
12,000+ NEW ADS POSTED ON craigslist
370,000+ MINUTES VOICE CALLS ON skype
98,000+ TWEETS
20,000+ NEW POSTS ON tumblr.
THE LARGEST SOCIAL READING PUBLISHING COMPANY
New Craigslist Ads
320+ NEW twitter ACCOUNTS
100+ NEW LinkedIn ACCOUNTS
13,000+ iPhone APPLICATIONS DOWNLOADED
1 associatedcontent NEW ARTICLE IS PUBLISHED
THE WORLD'S LARGEST COMMUNITY CREATED CONTENT!!
QUESTIONS ASKED ON THE INTERNET...
100+ Answers.com
40+ YAHOO! ANSWERS
600+ NEW VIDEOS
6,600+ NEW PICTURES ARE UPLOADED ON flickr
25+ HOURS TOTAL DURATION
70+ DOMAINS REGISTERED
50+ WORDPRESS DOWNLOADS
60+ NEW BLOGS
168 MILLION EMAILS ARE SENT
694,445 SEARCH QUERIES
1,700+ Firefox DOWNLOADS
695,000+ facebook STATUS UPDATES
125+ PLUGIN DOWNLOADS
1,500+ BLOG POSTS
79,364 WALL POSTS
510,040 COMMENTS
Google
Google Search
GO-Globe.com

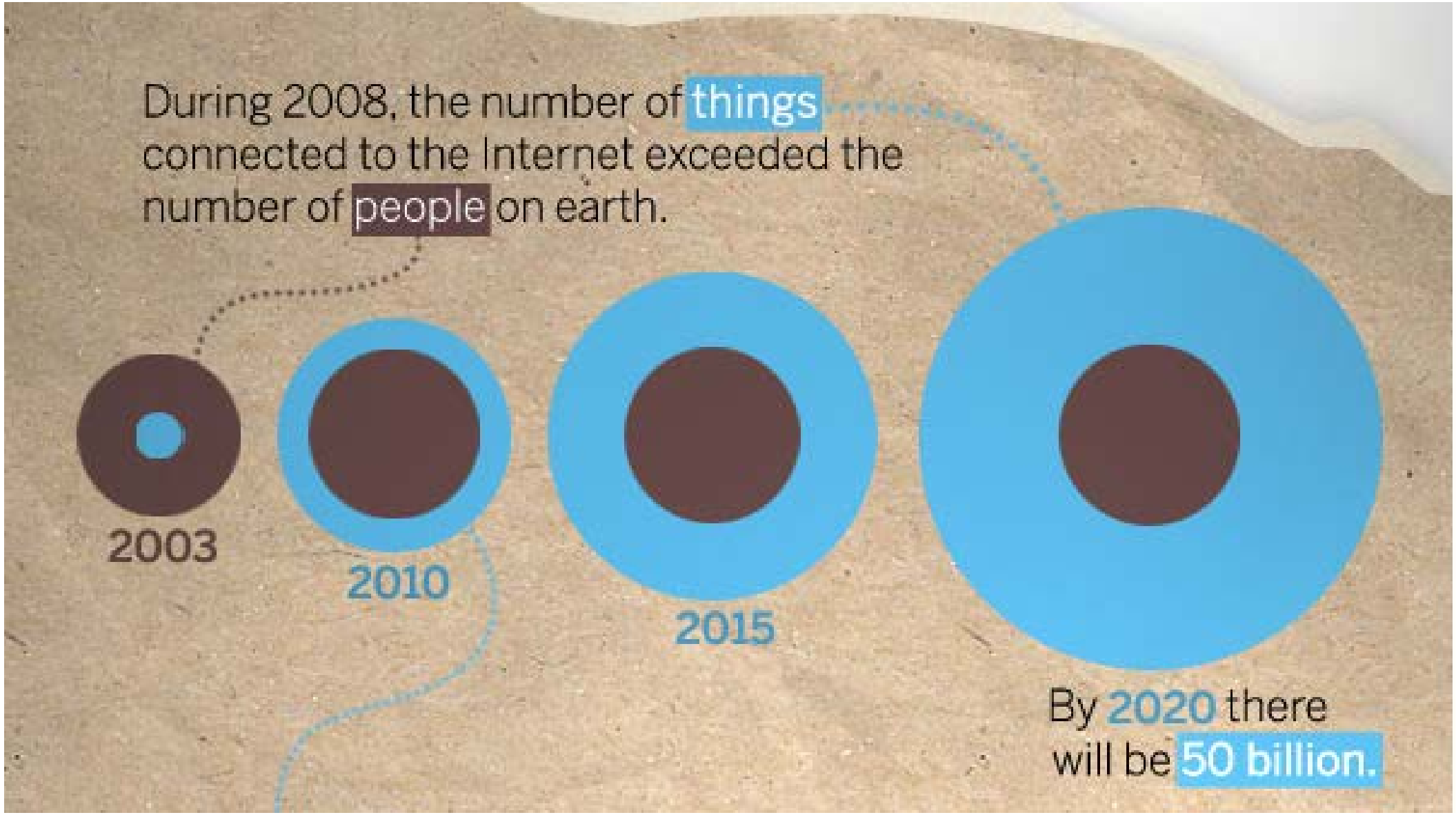


Image Courtesy: : CISCO

- 2020: 80 billion connected devices
- 2020: 5 billion internet users
- 2020: 500 devices with unique digital IDs per square kilometre

Brontobyte the new measurement for data
1,000,000,000,000,000,000,000,000,000

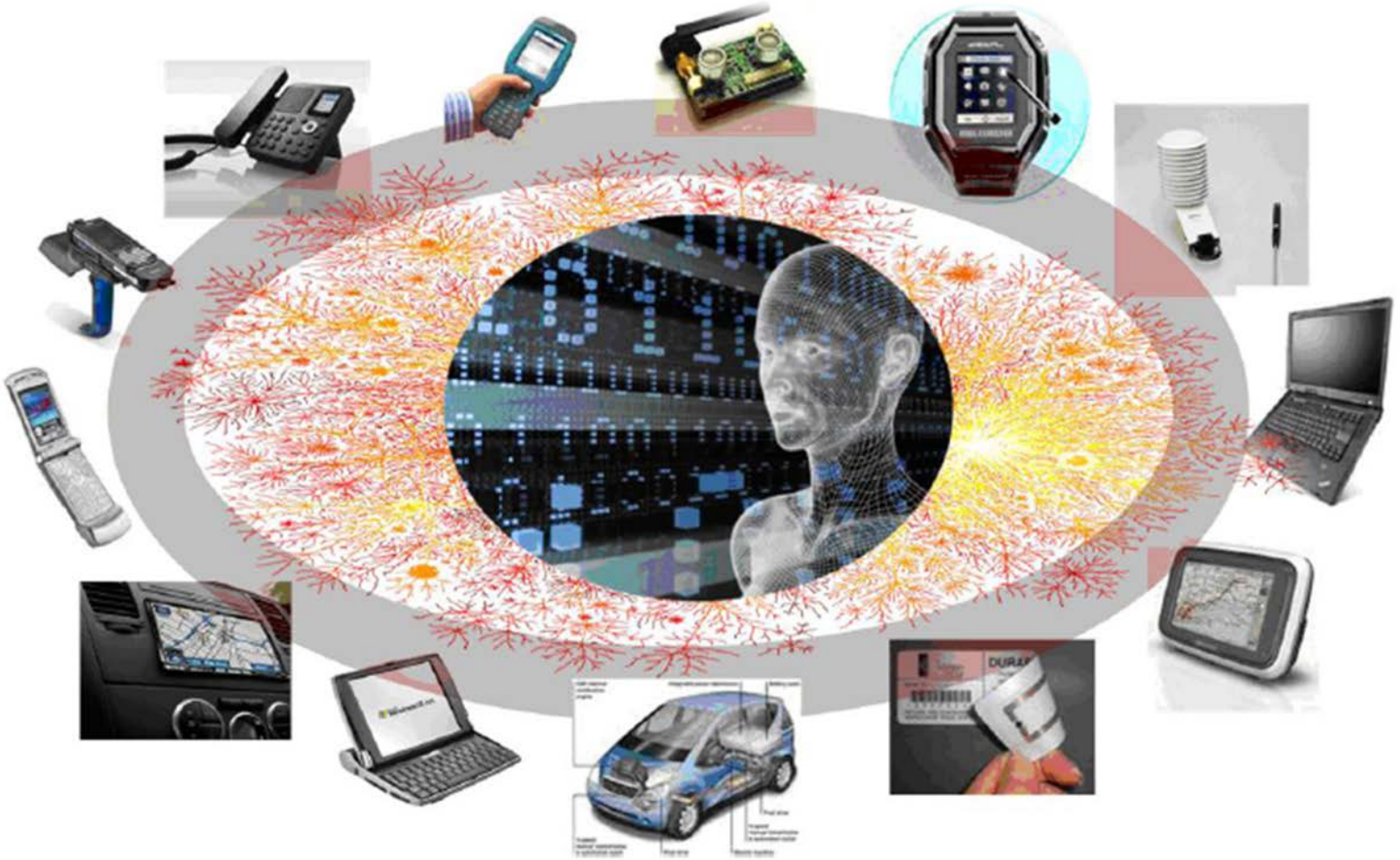
- is a scenario in which objects, animals or people are provided with unique identifiers and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction

A fast-growing market with 42 billion connected objects in 2015 and the promise of +14% annual growth up to 2025.

THE **INTERNET OF THINGS** (IOT)

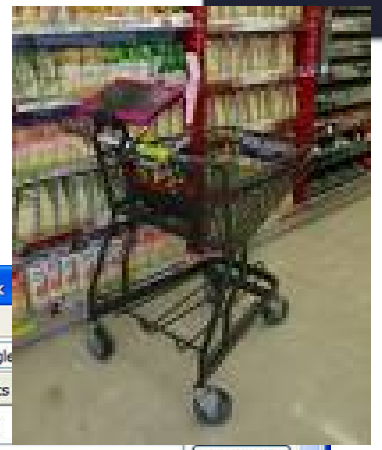
SOMETIMES **INTERNET OF EVERYTHING**)

Things Connected: communicated between physical world and information world



- Internet connects all people, so it is called “the Internet of People”
- IoT connects all things, so it is called “the Internet of Things”

Creating space for innovative apps



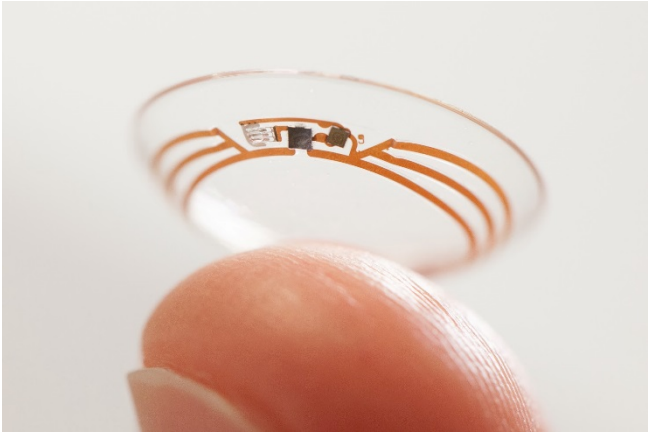
Smart City
Industrial & Commercial
Medical & Healthcare
Security & Surveillance
Transportation & Mobility
Logistics & Networking
123456
Smart care
Smart Society
Smart building
Smart Energy
Smart Working
Smart Retail
Smart Home
Smart Mobility

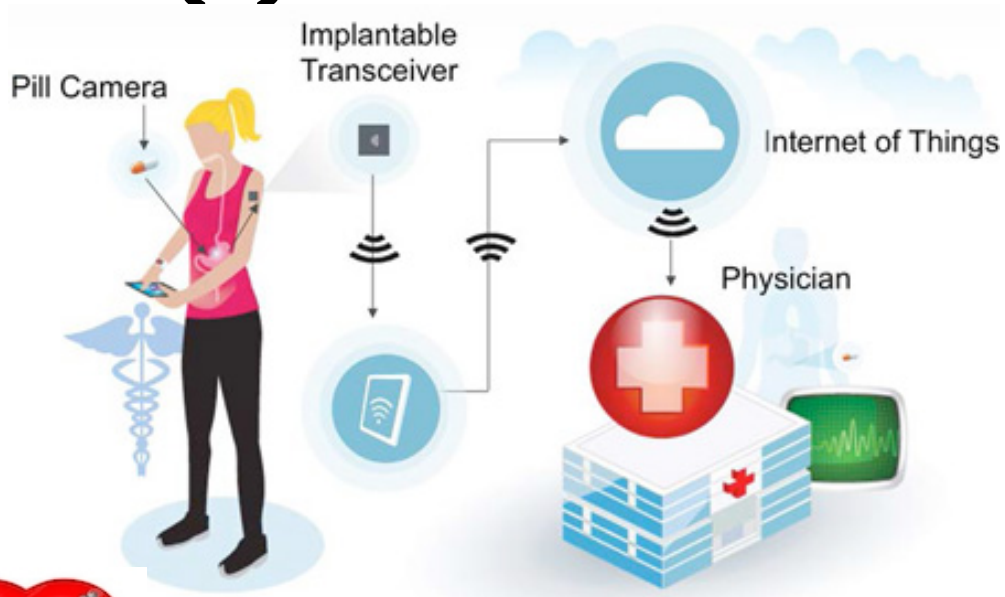
The Application of IoT(1) : shopping

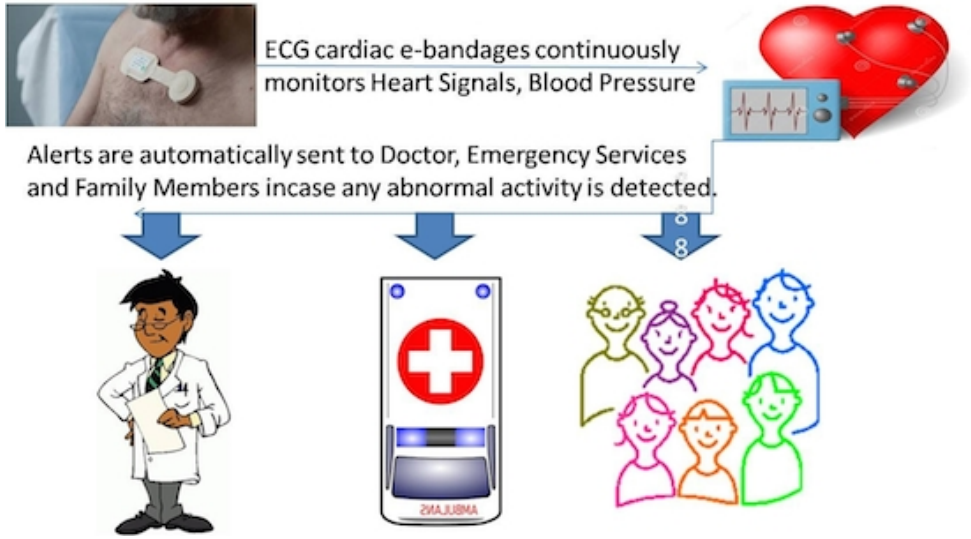
INTERNET OF THINGS

MediaPost's IoT Shopping

The Application of IoT(2) : Health Care







The Application of IoT(3) : Smart House

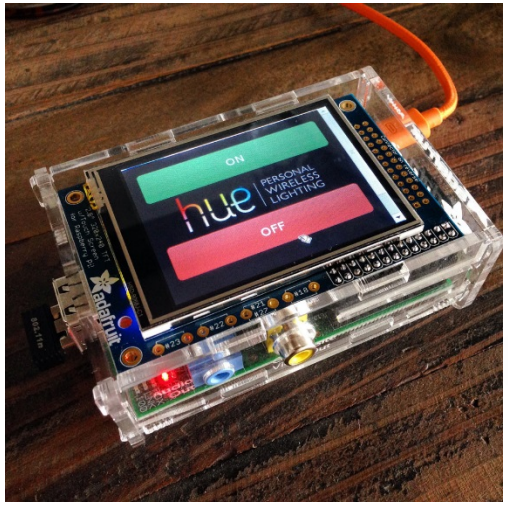
Z-WAVE
ZIGBEE
WI-FI
POWERLINE
BLUETOOTH LE
CUSTOM RF
SMART
HOME HUB
PWNED!!!
CLOUD SERVICES

The Role of Sensors in the IoT

- **Sensors are important for tagging, tracking, locating, and monitoring things, and for enabling things to be aware of the environment around them**
- **Sensors are a key enabler of the IoT and a foundational technology for many IoT building blocks and related technologies**

TI Sensortag

Raspberry Pi Hue



Raspberry

LittleBits CloudBit

Phone as a sensor

Fitbit

Wearable Technology Products

Culture

WE WANT TO IMPLANT THIS RFID TAG IN YOU.
THAT VIOLATES MY RIGHTS!
WE WANT TO IMPLANT THIS RFID TAG IN YOU AND IT'S ALSO A CELLPHONE, DIGITAL CAMERA, AND MP3 PLAYER.
COOL!
↑ WRONG
RIGHT →

Trust

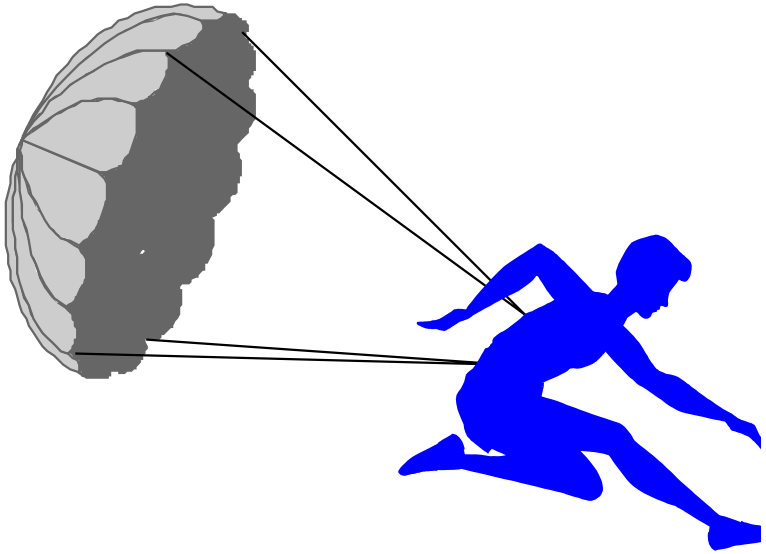
GOOD AFTERNOON, MR. HENFENNEL! HEMORRHOID CREAM AISLE SIX!
BEEP!
TOO MUCH INFORMATION IN MY MEDICAL I.D. CHIP.
TOLES
DON'T FORGET MOUTHWASH. I FIGURED THAT ONE OUT BY MYSELF.
©2004 THE WASHINGTON POST

WWW
TEAM
internet

SUCCESS
WEB
INCOME
BUSINESS
IDEA
TEAMWORK
WORKING WEB

CYBER CRIME

Road is Difficult, but Future is Bright



YOU DECIDE

- Any TIME
- Any PLACE
- Any THING

AUGMENTED REALITY:

A JOKE

OR

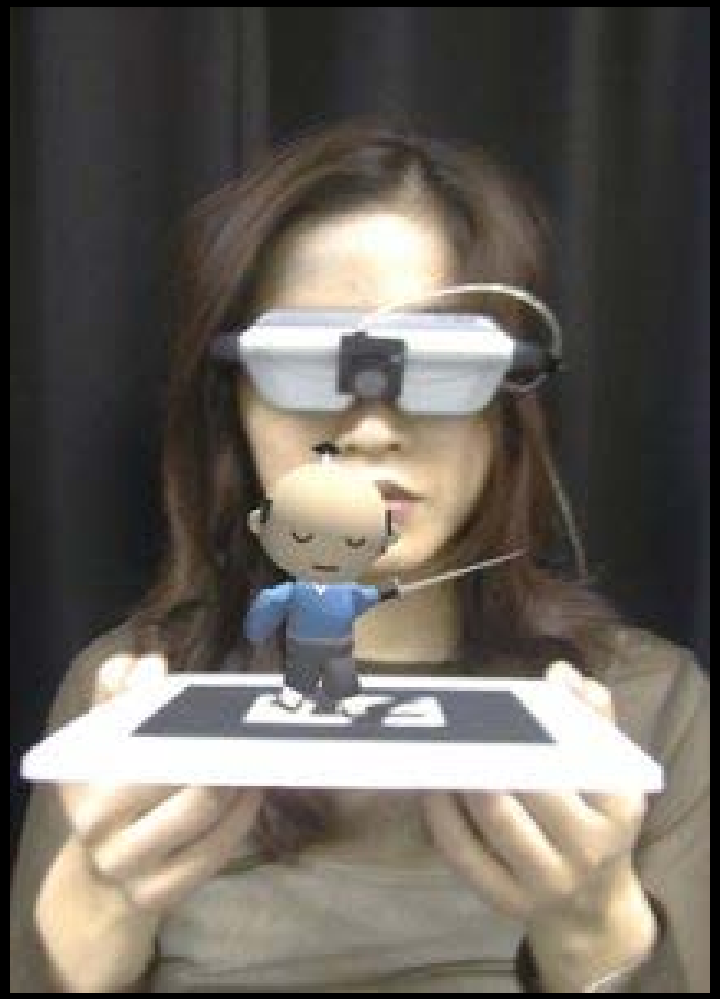
A REALITY?

WHAT IS AUGMENTED REALITY (AR)?

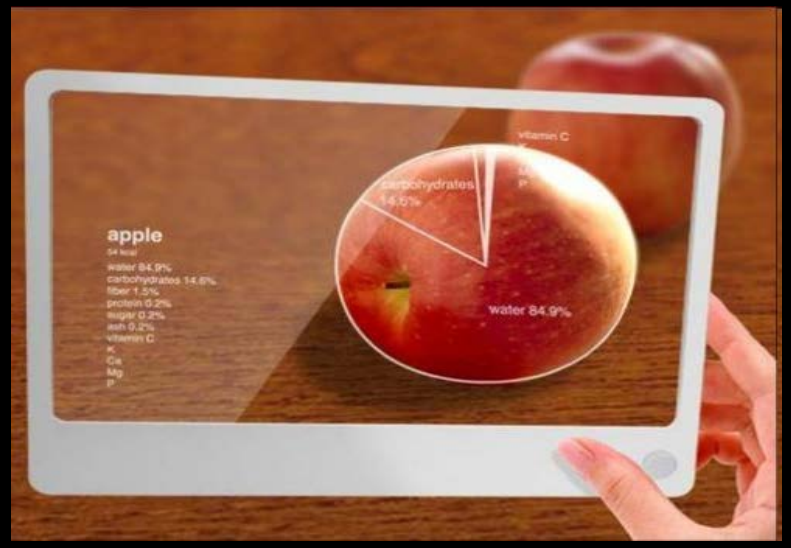
- A combination of
  - a real scene viewed by a user

  and

  - a virtual scene generated by a computer
  - that augments the scene with additional information.



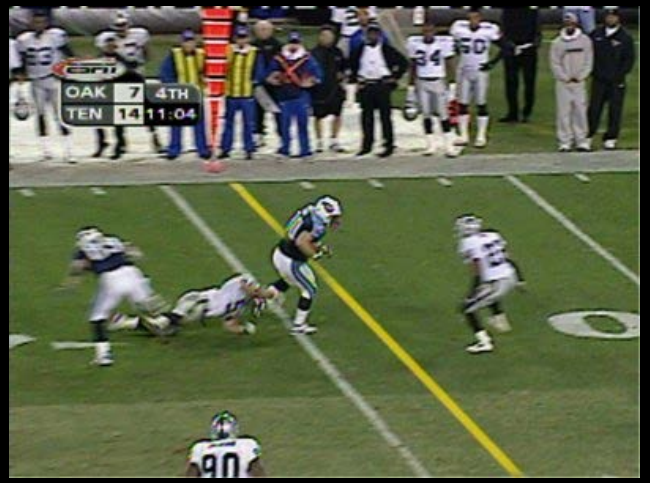
THE GOAL



- Augmented reality enhances one's perception.
- The real world is simply the foundation.
- The goal is to make a system that will be so efficient that the user will not be able to tell the difference between the real world and the virtual augmentation.

NATIONAL GEOGRAPHIC AR CAMPAIGN IN A SHOPPING CENTRE

HOW DOES AR WORK?

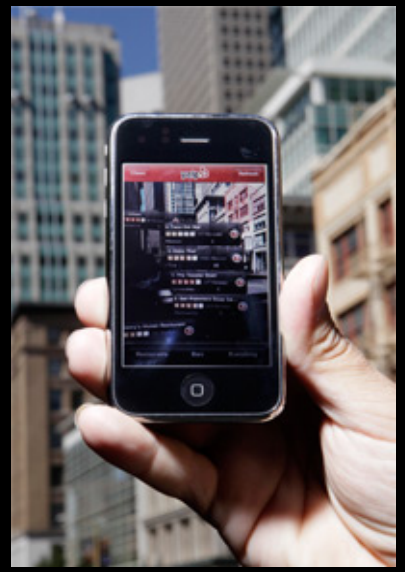


- Requires Internet connection
- Can be accomplished in two ways by:

1. Looking at a screen showing visible and augmented objects
2. Looking through a device using the generated screen display

TECHNOLOGY

- Drivers: video games, cell phone apps
- Display types:
  1. Head-mounted, or heads-up, displays
  2. Handheld displays
  3. Spatial displays



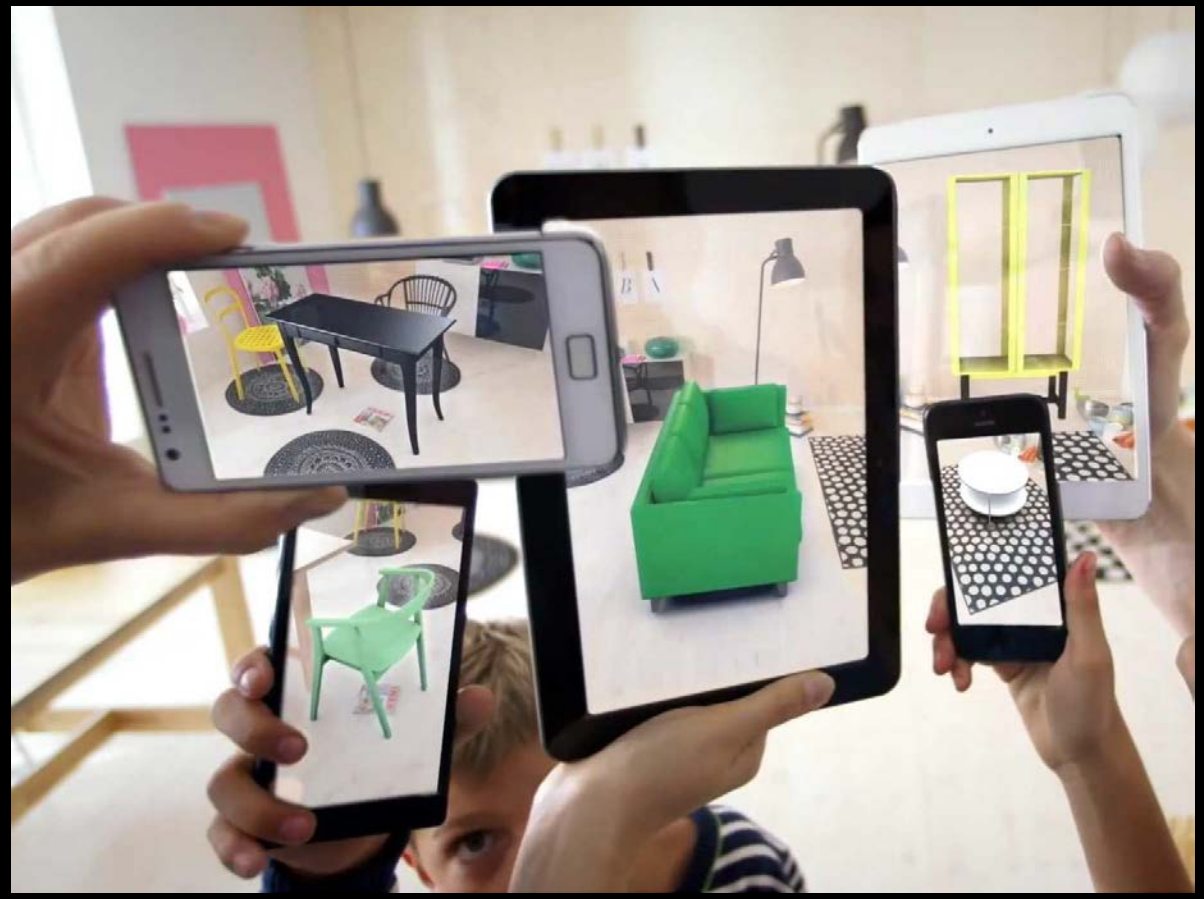
ADVANTAGES OF AR

- Can increase knowledge and information
- People can share experiences with each other in real time over long distances
- Games that provide an even more "real" experience
- Things come to life on people's mobile

CONCLUSION

Augmented Reality is a fantastic promotional tool and if used correctly can create a great ‘WOW factor’ for any application.

These applications can very well allow us to live our lives more productively, more safely, and more informatively.



APPS:

- AURASMA
- Anatomy 4D
- Enchantium

AURASMA

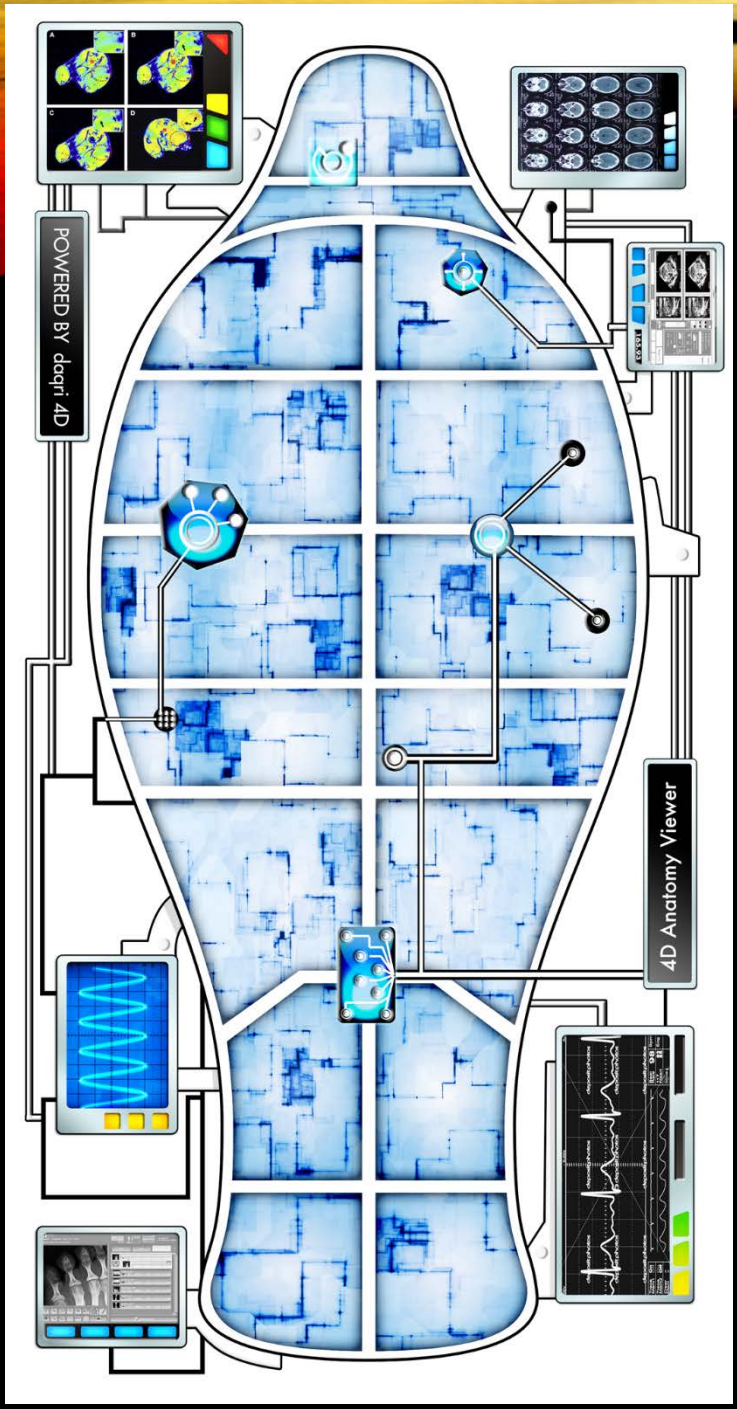
By Alex Kushleyev, Daniel Mellinger and Vijay Kumar
Produced and Directed by Kurtis Sensenig
University of Pennsylvania

AURASMA

musical strings

The
Toy Maker

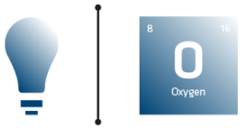
The
Marketeer



THE HEART

ELECTRICALLY CHARGED

Because the heart has its own electrical impulse, it can continue to beat even when separated from the body, as long as it has an adequate supply of oxygen.



HOSE VS. HAIR

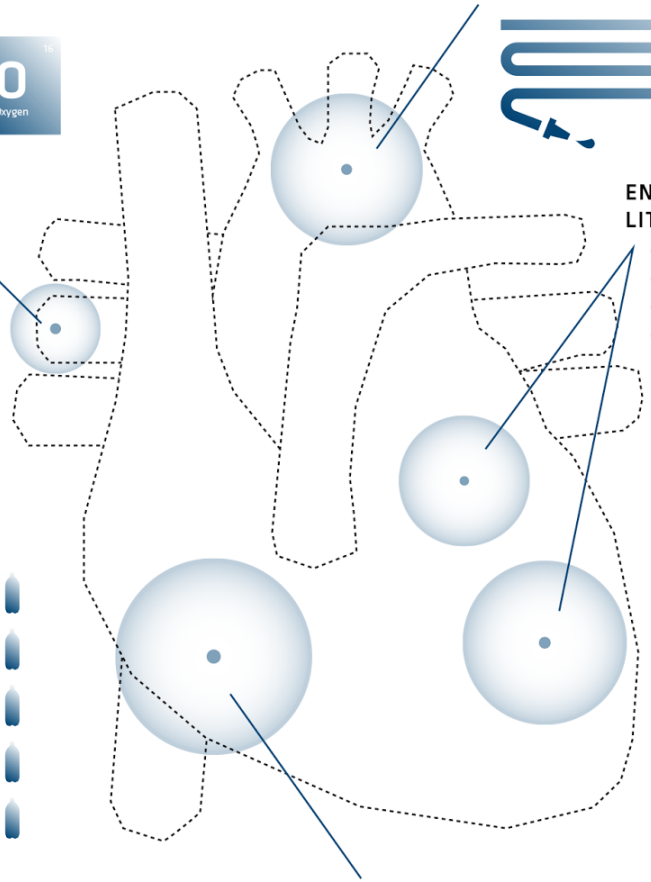
The aorta, the largest artery in the body, is almost the diameter of a garden hose. Capillaries, on the other hand, are so small that it takes ten of them to equal the thickness of a human hair.

PASS THE TISSUE

Blood is actually a tissue.

HEART POWER

The volume of blood pumped by the heart can vary over a wide range, from five to 30 liters per minute.

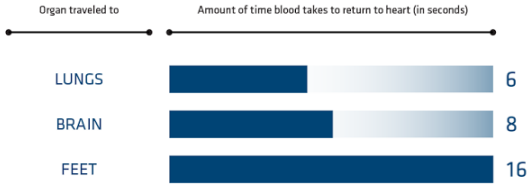


ENTRANCE HALL & LITTLE BELLY

"Atrium" is Latin for "entrance hall" and "ventricle" is Latin for "little belly."

HEART SPRINTS

Even at rest, the muscles of the heart work hard—twice as hard as the leg muscles of a person sprinting.



TRAVEL PRO

When the body is at rest, it takes only six seconds for the blood to go from the heart to the lungs and back, only eight seconds for it to go to the brain and back, and only 16 seconds for it to reach the toes and travel all the way back to the heart.

ANATOMY 4D | DAQRI