Tech Curiosity Session 1 of 6

Glen Maxson & Alan Freedman

Delaware Valley University

Fall II 2021

Welcome

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Tech Curiosity Presentation Archive

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Course Logistics

- This is CLR Course 302 - Tech Curiosity | Fall II
- Held each Wednesday, 9:25-10:40 a.m. via Zoom, but for those that want to get little more for their tuition money, Alan and Glen will be online around 9:00 a.m. each Wednesday before class.
- This is a dynamic (meaning you never know what we're going to talk about), interactive (we want to hear what's on your mind), and flexible (if you have a topic you want to research and talk about, you're welcome to take the stage) class.

Course Etiquette

- Please join the Zoom session on time if you are able. Initially, you'll be in a Zoom waiting room if you join before 9:00 a.m. After that you should be able to join without waiting.

- When the session starts, everyone will be muted. If you would like to ask a question, please use the 'raise hand' icon (we'll show you where that is), and using the space bar to 'press and talk' is probably easiest.

- Come with questions, and ideas you would like to hear about in future sessions. Each week's agenda will be based on what you want to hear about (mostly). Sometimes it's what WE want to talk about too…

Format

- Intro
- Tech in the news
- Presentation – based on whatever YOU want to know more about
- What's on your mind for next week's session

We'll be meeting each week from Oct. 20 – Dec. 1 (skipping Nov. 24)

All slides for each class will be posted the day before or morning of each class on seniortechadvisor.com ([here](#))

Need to stop by 10:25 today – why?

- **Future of Science & Innovation: Global Chip Shortage with Commerce Secretary Gina M. Raimondo & Sen. Todd Young (R-Ind.)**
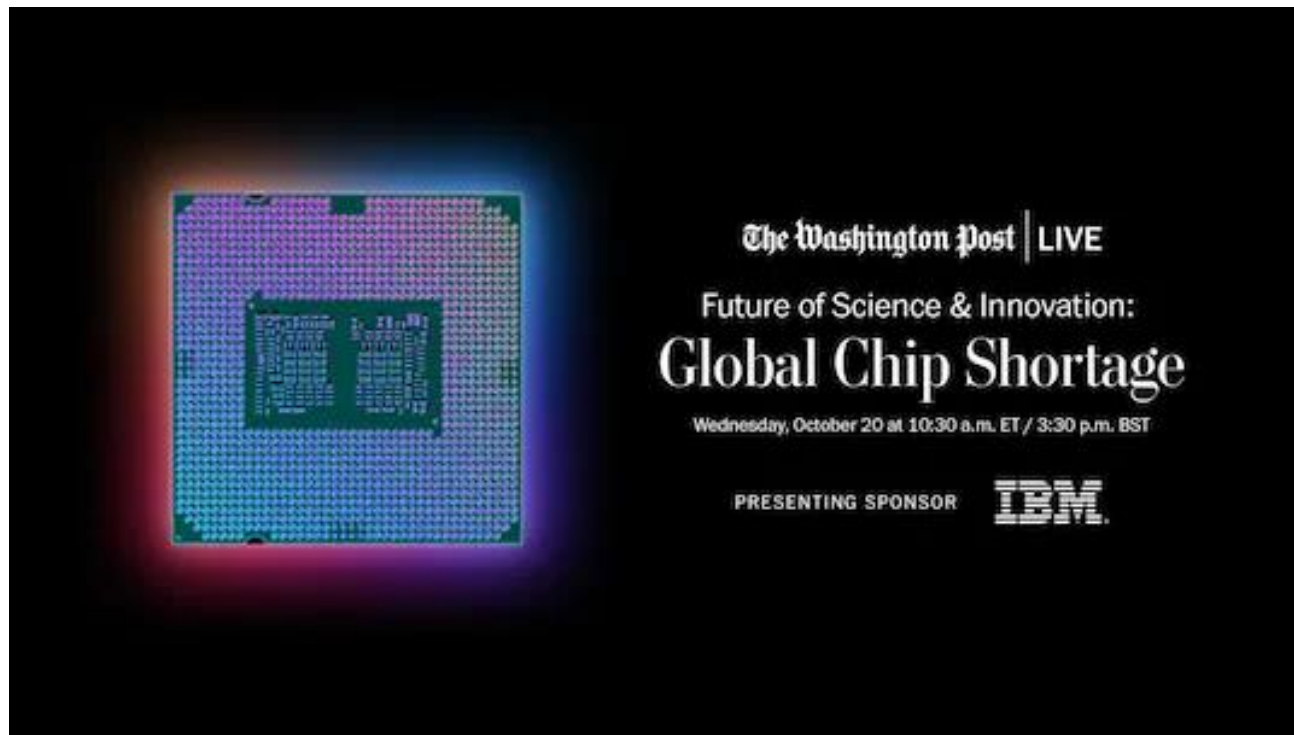
Intro

- Who am I
  - Worked for Boeing and Intel (16 years each, working on IT projects)
  - Speak 5 languages – Philly English, Windows, MacOS, Linux, and ChromeOS
  - Own a few 'computers' to stay current, teach and help people out
    - What's a computer you might ask?
- These are a few of my favorite things
  - Computing
  - Entertainment
  - Security Devices
  - Gadgets – incl. devices that talk back
  - Communication

Computing – Recent Acquistion

- Chromebooks
  - [Lenovo Chromebook 3 14" Laptop – Mediatek MT8183 – 4GB Memory – 64GB eMMC](#) ($169, Best Buy deal – now $289)

Entertainment

Roku

- [Roku Express - HD Streaming Player](#) $20
- [Roku Ultra 4K/HD/HDR](#) $48 (Black Friday sale)

Security Devices

Security System

[Wyze Cam Pan v2](#) ($40) + [Wyze Home Monitoring](#)

•$59.88 / year, plus Core Starter Kit $39.98 incl.

•Wyze Sense Hub

•Wyze Sense Keypad

•Wyze Sense Entry Sensors x2 ($25 for 3-pack)

•Wyze Sense Motion Sensor ($10 ea.) plus will add

Professional home security at a DIY price starting at $5/month 24/7 professional monitoring for houses & apartments ([video](#))

Wyze Sense Leak Sensor w/ Probe ($35 3-pack)

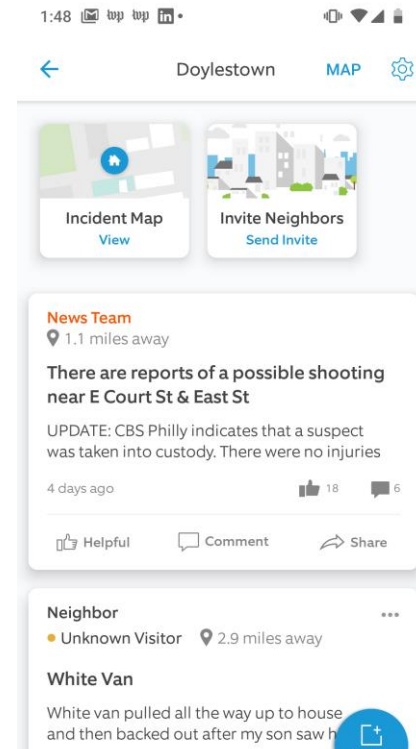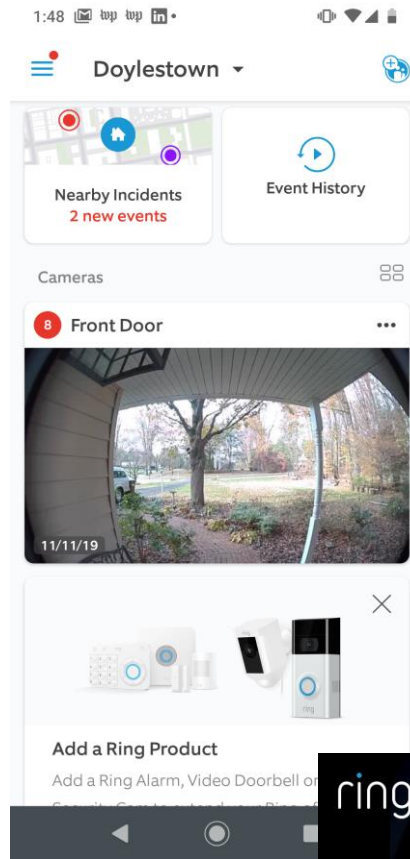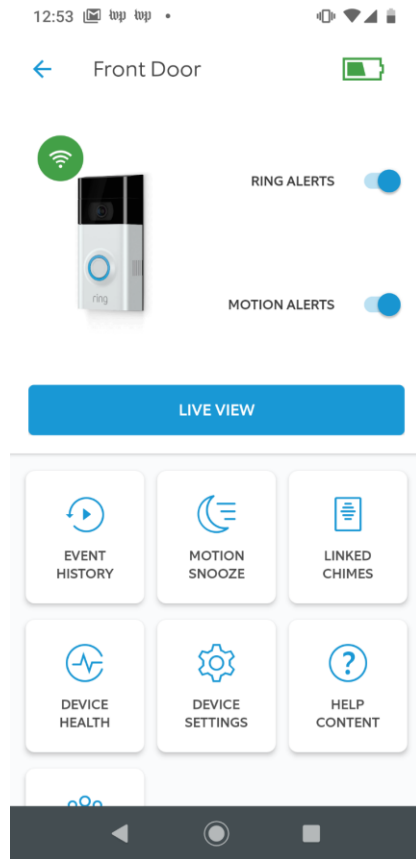| Camera | Hub | Keypad | Entry Sensor | Motion Sensor | Leak Sensor + Probe |

Ring

[Ring Video Doorbell
2 with HD Video](#)
$90 Amazon deal

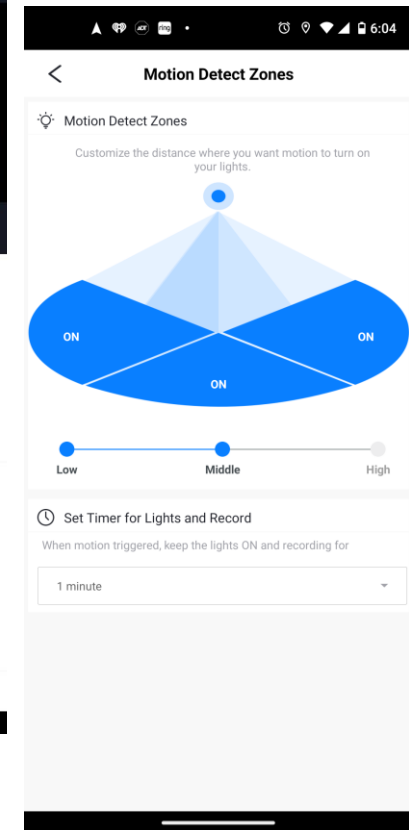## Smart Phone App

Feit Security Camera

Smartphone App

- Feit Electric LED Dual Head Motion Sensor Security Light with Camera ($100 on sale at Costco, now $130)
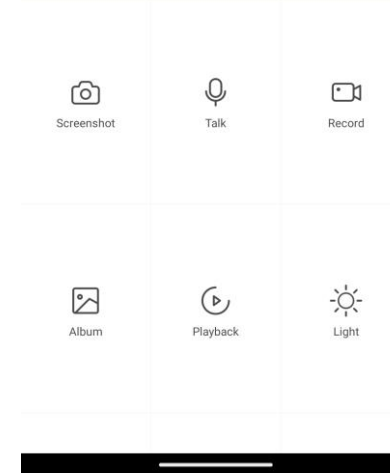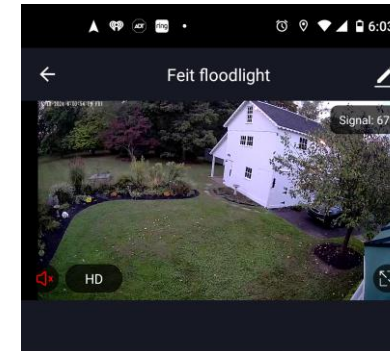
Other 'Useful' Gadgets

- Google Nest Learning Thermostat – Gen 3 $150 (PECO promotion w/ free Google Home Mini)
- Also plan to buy Google Nest Temperature Sensor that works with Nest Learning Thermostat ($34.50)

Smart Phone App
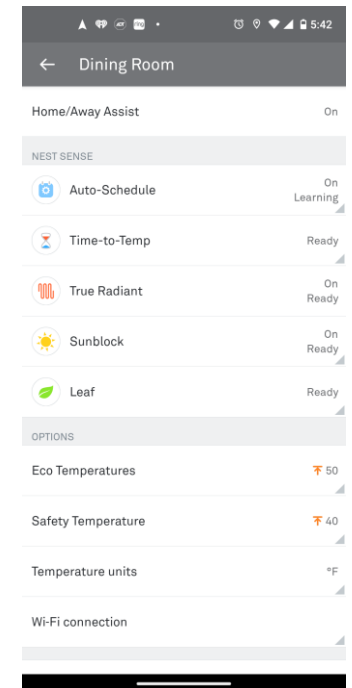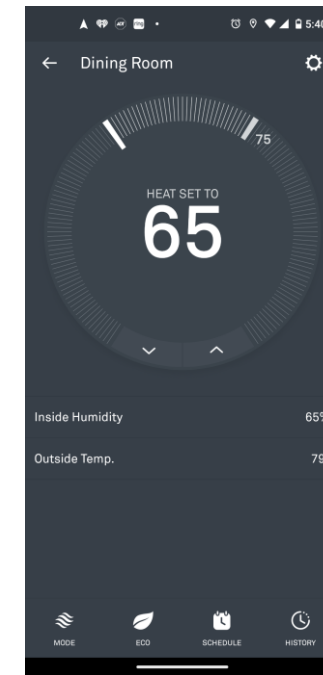
[Corentium Home Radon Detector by Airthings 223 Portable](#)

$165 on Amazon

Also available is an IoT version:

[Airthings Wave (2nd Gen) - Smart Radon Detector](#)

$170 on Amazon

- Amazon Echo
  - Amazon Echo Input $18
  - Amazon Echo Auto $25
  - Echo Dot (Gen 1) $100
  - Echo Dot (Gen 2) $25
  - Echo Dot (Gen 3) Free*
  - Echo Dash Wand (discontinued)
  - Echo Show 5 (Gen 1) $45
- Google Home Mini Free*

* Got these during various Amazon and Google/Spotify promotions

Smart watches

- **A Tale of Two Watches**
  - 'Apple Watch Series 6 (GPS) 44mm Space Gray Aluminum Case with Black Sport Band – Space Gray (free*, list price $429)
  - Wyze Watch (was $20, now $40).

*Join J&J's Heartline Study
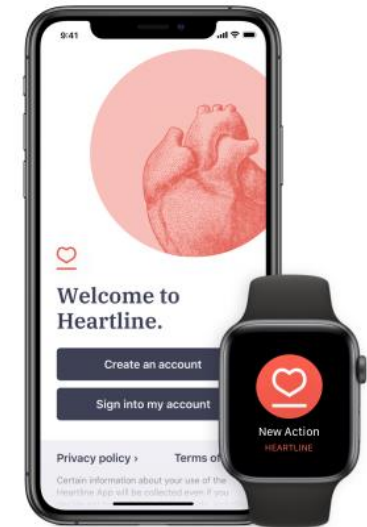
Note: For those joining the Heartline Study, an Apple iPhone is required!

Technology in the News

- **A multi-year [study](#) examining the use of a blood pressure monitor and a connected smartphone app has shown to reduce blood pressure.** The study had a sample of 28,189 U.S. adults with hypertension ranging from ages 43 to 58.
  - Participants in the study used the [Hello Heart app](#) to monitor their conditions, in addition to health counseling. After the first year of use, 85.7% of those with stage two hypertension had reductions in systolic pressure.
  - 69.7% of app participants with stage one hypertension reduced their blood pressure.

More about Smartphones

- Apple or Android

Android vs Apple ([which is better](#)?)

- Apple is better!
  - **You're invested in Apple's ecosystem.**
  - **The third-party apps are just better.**
  - **There's a bigger selection of accessories, although many are Apple proprietary like the Apple Lightning Connector.**
  - **There are enhanced privacy controls with app tracking notifications.**
  - **There's no bloatware.**
  - **You get quicker software updates.**
  - **It has better retail support.**

Android vs Apple ([which is better](#)?)

- Android is better!
  - **There are phones at every price.**
  - **It's more customizable.**
  - **You can (sometimes) expand the storage (this is important to me!)**
  - **USB-C is universal.**
  - **There's an actual file system (with drag-and-drop support on PC).**
  - **Innovative features usually land on Android phones first.**

Android vs Apple ([which is better](#)?)

- So now it's time to choose
  - Owning an iPhone is a ==simpler, more convenient experience. There's less to think about,== and because Apple's iPhone represents the single most popular brand of smartphone, there's an abundance of support everywhere you go.
  - Android ==ownership is a bit harder== in those respects. Yet it's simultaneously more freeing, because it offers more choice — choice of how much you want to spend, choice of hardware and software features, and choice in how you organize and personalize your experience. If you're extremely particular about the technology you use, you might find Android ==more liberating== — dare I say, ==fun==.

ATAs (what's an ATA you might ask?)

ATAs

- VoiP and Analog Telephone Adapters (ATAs) – what are these?
  - My favorite ATAs (assumes you have a good Internet service provider)
    - Current favorites: MagicJack and ObiHai
    - Previous favorite: Ooma
    - Not such a great deal: ZTE Wireless Home Phone Base
    - Also consider WhatsApp Messenger for international calling

    - ObiHai ($55, then free forever!)
    - MagicJack ($50, then free for 15 mth)
      - After that $39/yr, or $89 for 3 years = $2.50/mth
    - Ooma ($50, then $6.32/mth – local taxes)
    - ZTE Base ($25, then $15/mth with existing CC contract)

Other Topics of Interest

Mercury in Fluorescent Lighting: Unnecessary Health Risks & Actionable Solutions

- Executive Summary

- Report (.pdf also available here)

- Summary:

  - All fluorescent lamps contain mercury, a neurotoxin that can cause harmful and long-term health effects. This report outlines the health risks and environmental impacts of fluorescent lighting, highlights the many compelling advantages of transitioning to mercury-free alternatives, and gives actionable solutions to phase out mercury-added lamps in the United States.

  - AUTHORS
    - Peter Maxson, Expert to UNEP on mercury issues, Director, Concorde East / West Sprl
    - Michael Bender, Mercury Policy Project
    - Alicia Culver, Responsible Purchasing Network

More 5G reports

- **5G Technology** (a few examples)
  - **Is 5G Good or Bad for the Environment?**
  - **Huawei, Ericsson or Nokia? Apple or Samsung? U.S. or China? Who's Winning the 5G Races**
  - **Car Companies—Including Porsche, GM and Toyota—Have Big 5G Plans**
    Manufacturers aim to use the high-speed networks to do a host of things, including:
    - download software updates
    - update digital maps
    - sound alerts about road conditions
    - communicate with smart infrastructure such as traffic lights and buildings, and
    - they eventually talk to each other…

Plug-in cars are the future. The grid isn't ready

- By 2035, the chief automakers will have turned away from the internal combustion engine. It'll be up to the grid to fuel all those new cars, trucks and buses.

- So what's the issue (besides access to resources to manufacture batteries and recycling):

    - "We got to talk about the grid," said Gil Quiniones, NY Power Authority
    - By 2030 the nation will need to invest as much as $125 billion in the grid to allow it to handle electric vehicles. The current infrastructure bill puts about $5 billion toward transmission line upgrades.
    - Will rooftop solar panels, microgrids powered by hydrogen fuel, or small, next-generation nuclear reactors help?
    - "We have the technology to do it. The question is, do we have the will?"

William Shatner, Star Trek's Capt. Kirk, flies to space and back, adding to this year's number of civilian astronauts

- Captain Kirk (finally) gets to go to space!
    - The 90-year-old "Star Trek" actor, along with three others, flew on Blue Origin's New Shepard rocket, the company's second crewed flight, on Oct. 13

- Lasting just more than 10 minutes, the autonomous vehicle, named for Alan Shepard, the first American to reach space, climbed to a height of about 66 miles, four miles beyond one measurement of what is generally considered the edge of space.

- Aloft and free-floating above the Earth, the crew took in views of the planet below and the dark skies beyond while they experienced weightlessness for a few minutes.

- The capsule then touched down under parachutes in the desert as the company celebrated what appeared to be another successful mission.

- Shatner, 90, became the oldest person to have visited space..

See Also: *The love affair between Jeff Bezos and Star Trek*

Your driver's license could soon live on your phone

- More than 20 states have either considered, tested or already launched digital versions of driver's licenses that live on smartphones

- Apple plans to make digital licenses a key feature in its iOS 15 smartphone software in "late 2021"

- **What is a digital driver's license?**
  - Non-physical versions of a common form of state identification
  - Also referred to as a "mobile driver's license" or "mDL"

Technology in the News

Technology in the News

- **Virgin Galactic stock craters after commercial flights are delayed**
  - Virgin Galactic (SPCE) said it was making schedule changes that would delay a crucial test flight and the start of commercial services, which had been expected to commence late in the third quarter of 2022 (now looks like Q4 2022).
  - "The re-sequencing of our enhancement period and the Unity 23 flight underscores our safety-first procedures, provides the most efficient path to commercial service, and is the right approach for our business and our customers," he added.
  - Virgin Galactic said in September that it had been cleared to fly again after the FAA accepted its "corrective actions."
  - Virgin Galactic is reopening ticket sales at a base price of $450,000, with 600 people — who purchased tickets for between $200,000 and $250,000 when Virgin Galactic sold its first batch of tickets nearly a decade ago — already on the waiting list for a flight.

Technology in the News

- Waze unveiled new product features, including a "Drive with Headspace" option that adjusts Spotify playlists according to moods (incl. Aware, Bright, Hopeful, Joyful, and Open)

- Fujifilm has released the Instax Link Wide, a new smartphone printer. The Link Wide includes the ability to print QR codes in pictures to embed links, sound, location, and messages.

- Microsoft has pushed a Windows 11 update meant to fix AMD CPU issues; however, there are reports that it has further slowed processor performance.

Technology in the News

- Microsoft plans to shut down LinkedIn in China due to increased operating environment challenges and compliance requirements. In June, some academics in China had their LinkedIn accounts blocked due to "prohibited content."

- Google unveiled a new cybersecurity advisory team. The team will advise governments, enterprises, critical infrastructure operators, and small businesses on security and digital transformation. [Google Cybersecurity Action Team (GCAT)]

- Apple is studying ways to make AirPods into a health device, including for enhancing hearing, reading body temperature and alerting wearers of slouching. The company is also working on equipping the AppleWatch with blood-pressure and temperature-reading tools, as well as technology that aims to use iPhones to help diagnose depression and cognitive decline.

Technology in the News

- Google's Threat Analysis Group revealed it has sent over 50,000 warnings concerning disinformation campaigns, government-backed hacking, and financially motivated abuse. The alerts to at-risk users have increased 33% YoY.

- Twitter will begin placing ads within conversation threads after the first, third, and eighth replies. The social media app would make the ad format optional for creators, who would share the ad revenue.

- **Facebook [launched](#) the pilot of its new digital wallet, Novi, in the U.S. and Guatemala.** Novi offers a free, secure, and instant way people can send money abroad. Facebook is partnering with Coinbase and stablecoin issuer Paxos; users will be able to send and receive Pax Dollars, USDP.
  - Facebook chose Paxos' USDP to test its new systems with a stablecoin backed by the U.S. dollar, a stablecoin whose reserves are held 100% in cash and cash equivalents.
  - Paxos received preliminary conditional approval from the Office of the Comptroller of the Currency* (OCC) in April on its bank charter request.
  - Users need a valid government I.D. to use the digital wallet..
    - Users need a debit card to add money to their accounts.
    - 1 U.S. dollar is equal to 1 USDP. Users can withdraw money received through Novi in their local currency.

*The Office of the Comptroller of the Currency (OCC) is an independent bureau of the U.S. Department of the Treasury. The OCC charters, regulates, and supervises all national banks, federal savings associations, and federal branches and agencies of foreign banks.

Technology in the News

- **Facebook announced [Ego4D](#) for AI training, a dataset of 3,025 hours of 'egocentric' video of daily life activities captured by 855 camera wearers from nine countries.** The social media platform worked on the dataset with [13 universities](#), including Carnegie Mellon, the University of Bristol, and the University of Tokyo.
  - The dataset includes scenarios in 74 locations, including audio, 3D meshes, eye gaze, stereo, and synchronized video from multiple camera angles.
  - Ego4D aims at training AI assistants and robots on episodic memory, forecasting, hand-object interaction, audio-visual diarization, and social interaction.

See also: [Ego4D: Around the World in 3,000 Hours of Egocentric Video](#)

Technology in the News

- **[Scientists successfully encode famous research paper in fluorescent dye](#)**
  - **The problem:** "How do you store information in such a way that it's simple to do, but has the characteristic that it minimizes the energy required to keep it stored and does not require vast amounts of new technology to make it work?"
  - **Solution:** Select seven store-bought fluorescent molecules, created various mixtures that stood in for sequences of computer language, or bits, and used an ink-jet printer to permanently dot the mixtures onto a small section of an already tiny slide.Then read the information with a fluorescence microscope.
  - Faraday's paper was perfectly encoded and the microscope read the fluorescent data over 1,000 times with no significant loss of information. Plus, as the data is permanently fused to the surface.

Technology in the News

TESLA AUTOPILOT REAR ENDS A HONDA - 20 FAILS & SAVES | TESLACAM STORIES #92

2:15 / 13:00

Scroll for details
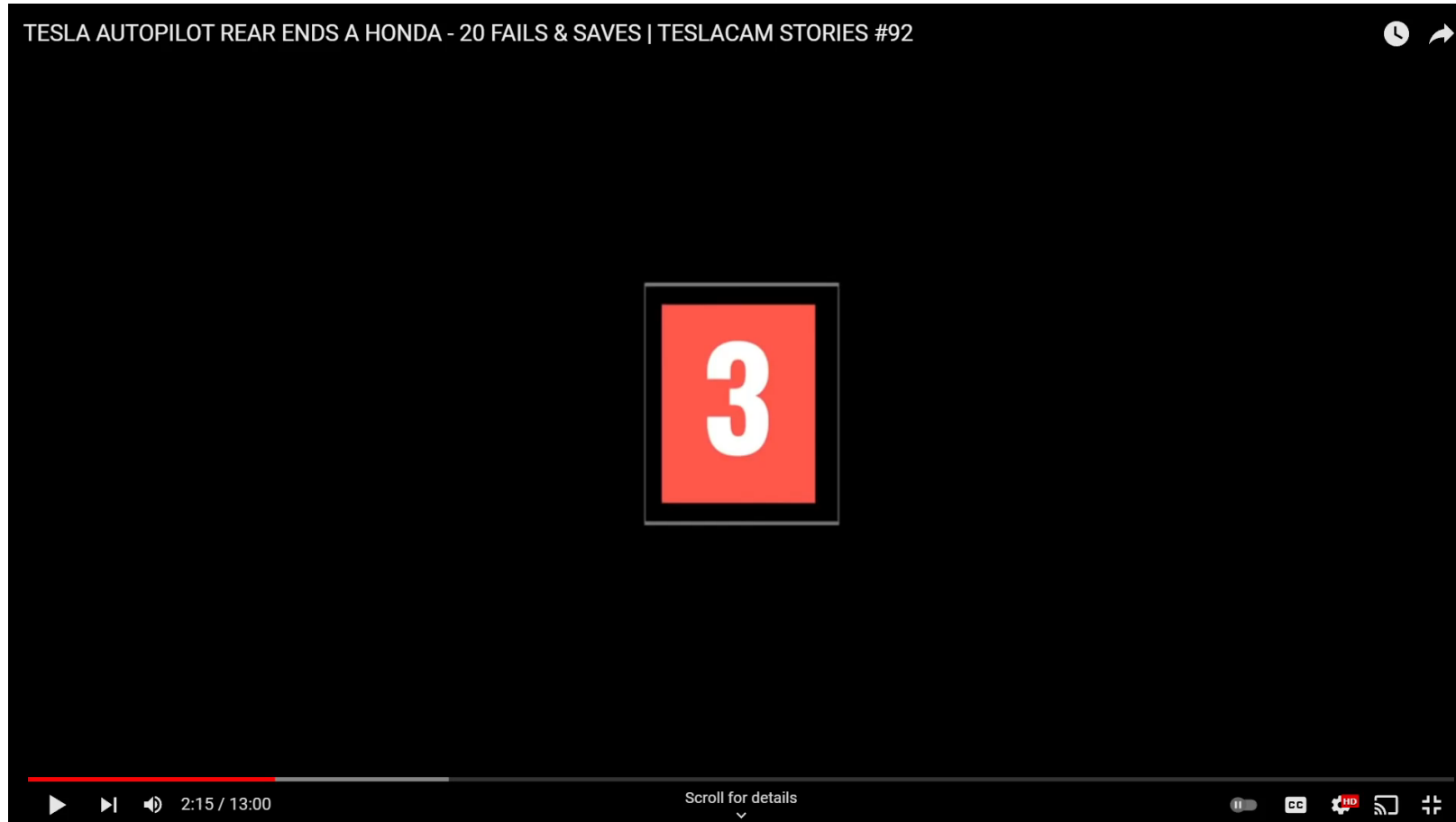
GPS

What is GPS and how does it work? (source – video 2:10min)
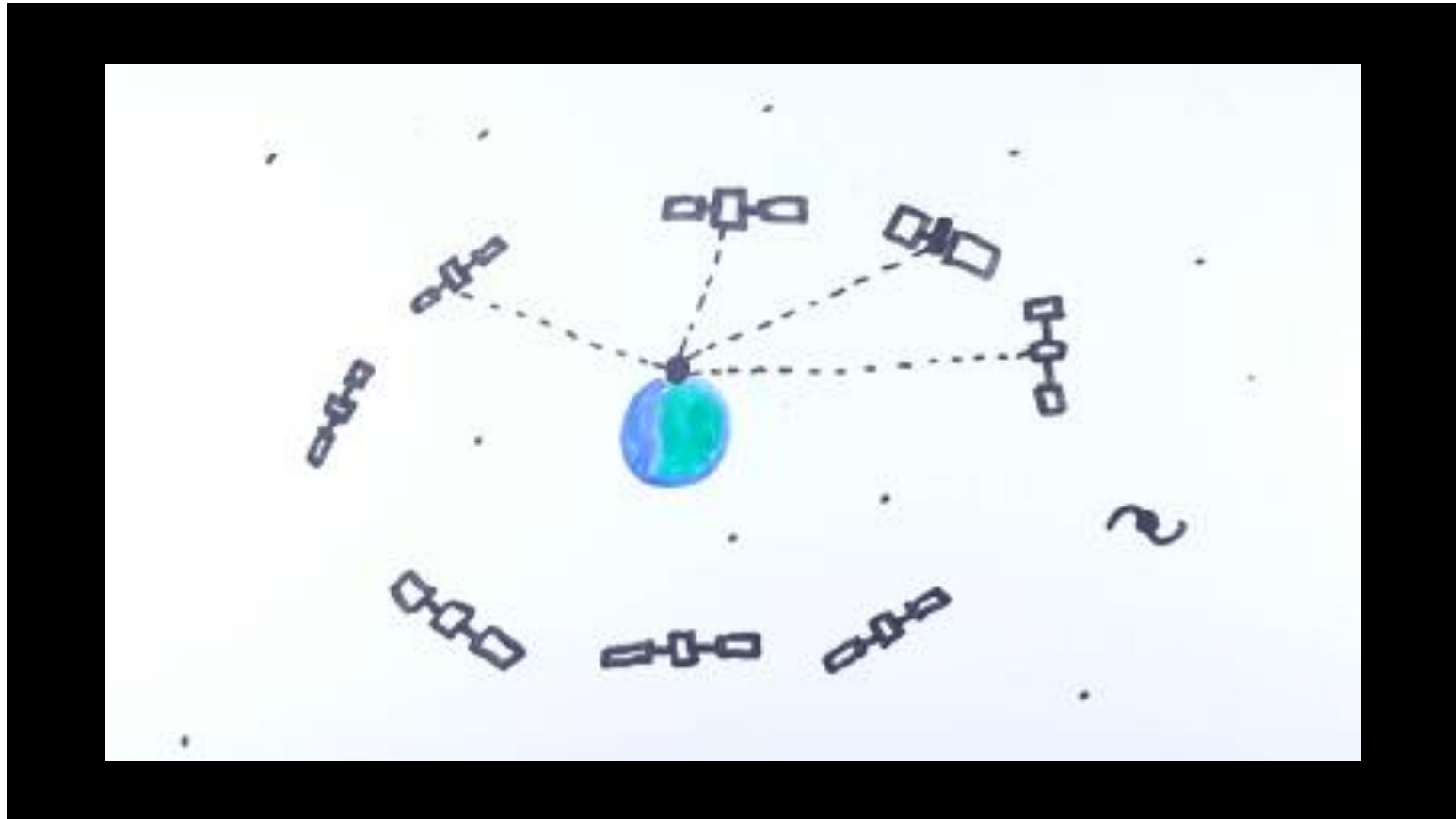
GPS

- [Two Decades of Development and Evaluation of GPS... (1999)](#)
- [GPS Future and Evolution](#)
  - The [GPS](#) is a space-based global navigation satellite system (GNSS) that provides reliable positioning, navigation, and timing services to civilian and military users on a continuous worldwide basis. GPS is a U.S.-owned utility, developed by the U.S. Air Force starting with the program in 1978.
  - The U.S. actively engages in bi-lateral cooperation: Europe, Japan, India, Russia and multi-lateral cooperation: International Committee on GNSS (ICG), Asia Pacific Economic Cooperation (APEC), [International Civil Aviation Organization (ICAO)](#), [International Maritime Organization (IMO)](#), [International Telecommunication Union (ITU)](#) International Civil Aviation Organization (ICAO), International Maritime Organization (IMO), International Telecommunication Union (ITU).

GPS

- The operational GPS satellite constellation consists of 24 NAVSTAR satellites arranged in six 55° planes around the Earth so that a minimum of four satellites would always be in view above the horizon.ce segment

- GPS satellites fly in medium Earth orbit (MEO) at an altitude of approximately 20,200 km (12,550 miles). Each satellite circles the Earth twice a day.
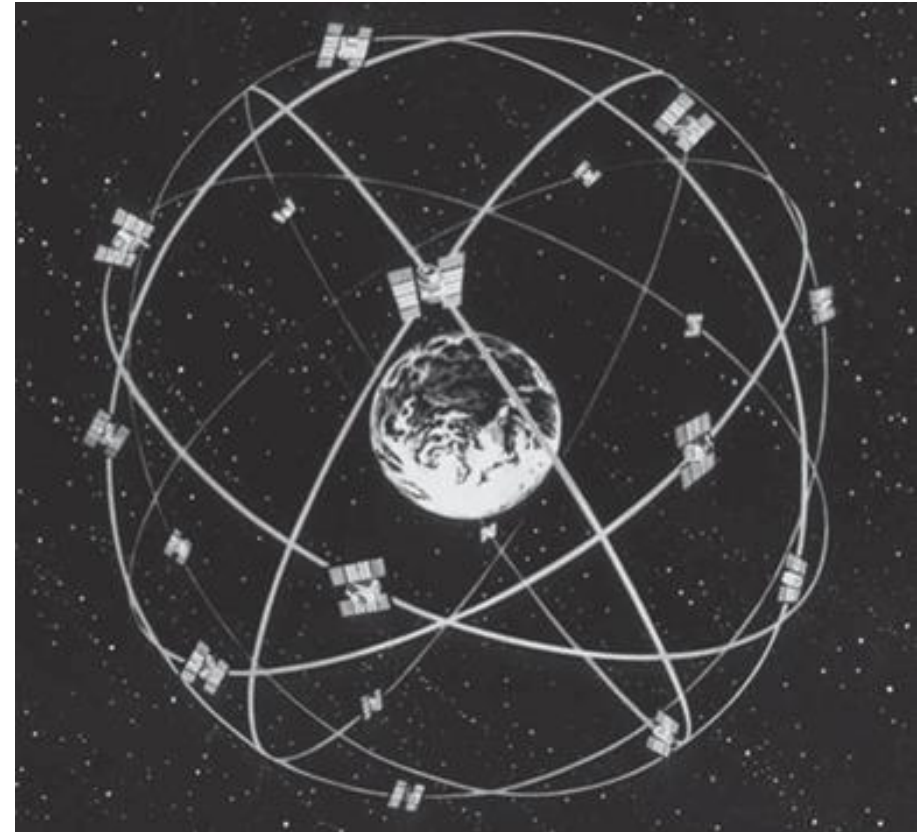
Space Segment Futures

LEGACY SATELLITES		MODERNIZED SATELLITES		
GPS IIA satellite	GPS IIR satellite	GPS IIR-M satellite	GPS IIF satellite	GPS III satellite
BLOCK IIA	BLOCK IIR	BLOCK IIR-M	BLOCK IIF	GPS III/IIIF
0 operational	8 operational	7 operational	12 operational	4 operational
■ Coarse Acquisition (C/A) code on L1 frequency for civil users ■ Precise P(Y) code on L1 & L2 frequencies for military users ■ 7.5-year design lifespan ■ Launched in 1990-1997 ■ Last one decommissioned in 2019	■ C/A code on L1 ■ P(Y) code on L1 & L2 ■ On-board clock monitoring ■ 7.5-year design lifespan ■ Launched in 1997-2004	■ All legacy signals ■ 2nd civil signal on L2 (L2C) LEARN MORE ➡ ■ New military M code signals for enhanced jam resistance ■ Flexible power levels for military signals ■ 7.5-year design lifespan ■ Launched in 2005-2009	■ All Block IIR-M signals ■ 3rd civil signal on L5 frequency (L5) LEARN MORE ➡ ■ Advanced atomic clocks ■ Improved accuracy, signal strength, and quality ■ 12-year design lifespan ■ Launched in 2010-2016	■ All Block IIF signals ■ 4th civil signal on L1 (L1C) LEARN MORE ➡ ■ Enhanced signal reliability, accuracy, and integrity ■ No Selective Availability LEARN MORE ➡ ■ 15-year design lifespan ■ IIIF: laser reflectors; search & rescue payload ■ First launch in 2018
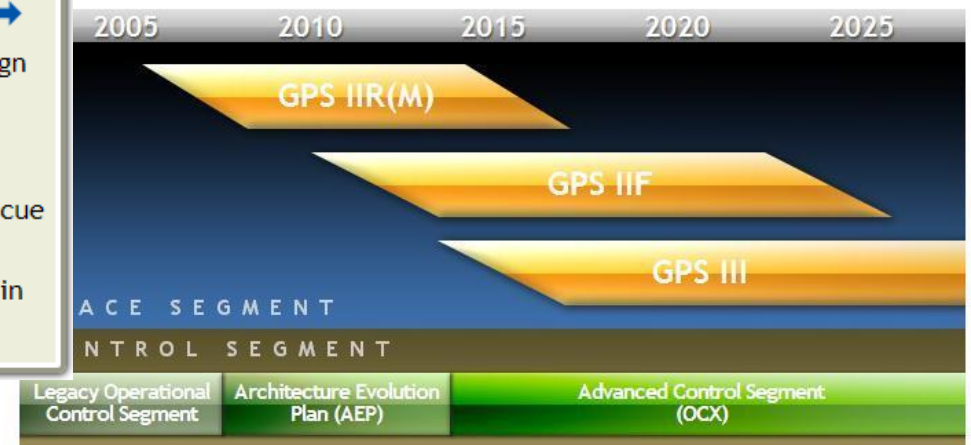
Who is Brad Parkinson?

- **The Origins of GPS, and the Pioneers Who Launched the System** May 1, 2010
- **GPS pioneers honored with Queen's award at Buckingham Palace** Dec 3 2019
  - Bradford Parkinson said: "Today marks a landmark moment in all of our lives—there is no prize for engineering greater than this, it is an honor. This recognition reflects the responsibility incumbent upon those developing technology today to strive to do so for the good of humanity. Day-after-day, we are astounded at the new ways in which people across the world use GPS. It is a 'System for Humanity' in each and every sense."
- My father in-law's classmate and companymate at the Naval Academy
  - Brad lived across the hall from me at USNA from 1953 to graduation in 1957. While in SLO for David's graduation Marilyn and I visited with Brad at his palatial home outside SLO. One of his sons is sheriff of the territory.

Our brains on technology

Our brains on technology

- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7366948/#:~:text=Potential%20harmful%20effects%20of%20extensive,brain%20development%2C%20and%20disrupted%20sleep.

- https://wexnermedical.osu.edu/blog/how-internet-affects-your-brain

- https://www.scientificamerican.com/article/are-digital-devices-altering-our-brains/

Our brains on technology

- Some say our gadgets and computers can help improve intelligence. Others say they make us stupid and violent. Which is it?

  - **Research shows that by constantly distracting us**, the Internet affects cognitive performance but does not radically alter our brains.

  - **The findings also suggest that although video games** and brain training influence aggression and cognitive performance, respectively, the extent of that influence is much less than many would think.

  - **The risks of digital devices might be minimized** by educating people in ways to enhance concentration, self-control and critical-thinking skills.

Our brains on technology

- Discussion:
  - Are we becoming 'stupid'?
  - Have we become (better) multitaskers?
  - What about our 'attention span'?
  - Do video games increase aggression?
  - Is gaming better for our brains?

  Fact: young people must be taught to develop their concentration, self-control and critical-thinking skills!

Our brains on technology

- More on this topic can be found in this series of book reviews I taught in 2017:
  - Born Digital by Urs Gasser & John Palfrey
  - Alone Together by Sherry Turkle
  - Reclaiming Conversation by Sherry Turkle
  - The Shallows by Nicholas Carr
  - The Glass Cage by Nicholas Carr
  - What Technology Wants by Kevin Kelly
  - The Inevitable by Kevin Kelly
  - Irresistible by Adam Alter

What's on your mind for next week?

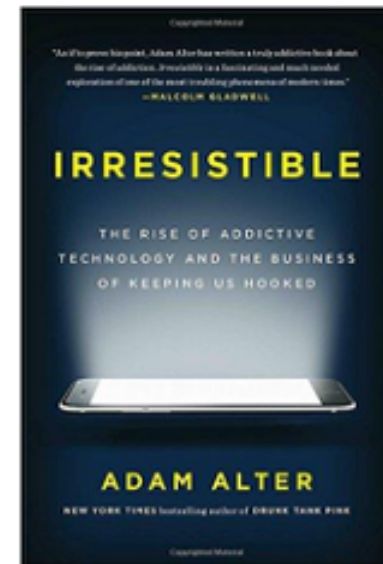# Extra Credit

Some slides from my 2017 class

Tech Talks: Tech for Seniors
Addiction by Adam Alter

Center for Learning in Retirement - Fall 2017

Glen Maxson

seniortechadvisor.com

Irresistible:

The Rise of Addictive Technology and the Business of Keeping Us Hooked

Review of a book by Adam Alter

Introduction

Adam Alter is an Associate Professor of Marketing at New York University's Stern School of Business, with an affiliated appointment in the New York University Psychology Department.

Adam is the *New York Times* bestselling author of two books: *Irresistible* (March, 2017), which considers why so many people today are addicted to so many behaviors, from incessant smart phone and internet use to video game playing and online shopping.

2017 TED Talk
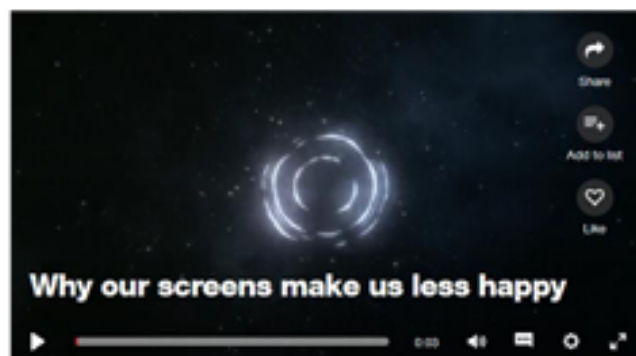
What are our screens and devices doing to us? Psychologist Adam Alter studies how much time screens steal from us and how they're getting away with it. He shares why all those hours you spend staring at your smartphone, tablet or computer might be making you miserable -- and what you can do about it.

NPR Interview (Mar. 13, 2017)

'Irresistible' By Design: It's No Accident You Can't Stop Looking At The Screen (30:20)

Adam's definition of "addiction"?

It is something you enjoy doing in the short term, that undermines your well-being in the long term — but that you do compulsively anyway.

Play Intro

The Addicted Brain (Sept. 17 National Geography)

p. 41 – In the Grip of Gaming

In Seoul, e-stadiums and game parlors charge about a dollar an hour, and some venues are open around the clock. Soon after South Korea made super-high-speed Internet cheap and widely available, it became clear that some people were ruining their lives through obsessive game playing. The government now pays for treatment. The American Psychiatric Association hasn't recognized compulsive gaming as an addiction, but it lists Internet game disorder as 'requiring more study'.

Hijacking the Brain (continued)

A NATURAL HIGH
Our brains evolved a dopamine-based reward system to encourage behaviors that help us survive, such as eating, procreating, and interacting socially.

NEURON ACTIVITY
In a normal state
Neurotransmitters carry nerve impulses across synapses between cells to excite or inhibit activity.

Terminal of neuron

Dopamine stored in neurons

Dopamine transporters

Synapse

Dopamine

Dopamine receptors

Dendrite

In an excited state
Dopamine temporarily floods a synapse when a pleasurable activity, such as gambling, sex, shopping, or gaming, is anticipated or experienced.

Dopamine temporarily floods synapse

Dopamine transporters remove excess dopamine from synapse

Hijacking the Brain (continued)

A CHEMICAL RUSH

Different drugs interact with the reward system in unique ways to keep synapses artificially flooded with dopamine. That dopamine rush can rewire your brain to want more drugs, leading to addiction.

Cocaine blocks dopamine removal from synapse

On cocaine
By interfering with dopamine transport, cocaine prevents removal of excess dopamine from synapses.

Heroin blocks dopamine inhibitors

Dopamine inhibitor receptors

In VTA

Dopamine floods synapse

In brain reward system

On heroin
Synapses flood with dopamine when heroin blocks dopamine inhibitors in the VTA.

Meth displaces dopamine into synapse

On methamphetamine
The drug reverses the natural, controlled flow of dopamine into neurons, forcing dopamine to rush into synapses instead.

Common 'behavioral addictions':

- Exercise
- Video games
- Gambling
- Work
- E-mail (p 109)
- Social media
- Binge watching
- Hoarding

- ...

What do these have in common?

- Behavioral addiction is rooted in environment + circumstance
- Might fulfill a psychological need, obsession, compulsion
- May be detrimental to work, health, hygiene, social interaction...
- Often becomes something we 'want' versus something we 'like'

What makes tech so 'irresistible'?

By design,

- Goal setting, perfectionism – time and numbers (e.g. FitBit)
- Classic reinforcement – provide small doses of positive feedback (work)
- Uncertainty - Facebook, Instagram... (social media)
- 'Loss as motivation' – the gambler's paradox (slots)
- Mobile access – iPad and iPhone enabled (mobile devices)
- Ludic loops – complete one challenging element, then the next... (video games)
- 'Flow' - proximal (skill) development – skill vs. challenge (video games)
- Zeigarnik effect – incomplete experiences (e.g. cliff-hangers) (TV shows)
- MUDs & MMOs - immersion, achievement, social (connection) (video games)
- Absence of Stopping rules (all)

Bottomline: Every technique in the book is used to get and keep us hooked!

GDPR vs privacy US laws

- https://www.ispartnersllc.com/blog/us-nationwide-data-privacy-law-gdpr/

- https://edaa.eu/a-legislative-comparison-us-vs-eu-on-data-privacy/

- https://www.forbes.com/sites/forbestechcouncil/2020/07/29/the-privacy-mindset-of-the-eu-vs-the-us/?sh=57bff0597d01

The Privacy Mindset Of The EU Vs. The US

- The norm in the U.S. that online behavior gets tracked and used for a slew of subsequent manipulation. U.S. legislation isn't even close to providing adequate protection of consumer privacy interests.

- Americans choose to believe that their online behavior being tracked happens in their best interests or is a price to pay for getting free or discounted products.

- GDPR was adopted on April 14, 2016, and before it became enforceable on May 25, 2018, the U.S. Congress enacted the Clarifying Lawful Overseas Use of Data (CLOUD) Act on March 23, 2018. Rather than being compatible with the GDPR, the U.S. CLOUD Act overrules it.

The Privacy Mindset Of The EU Vs. The US

- <mark>Federal law requires U.S.-based software companies and IT service providers to ensure that authorities can have access to all stored data, including data stored on foreign servers.</mark> Furthermore, it guards U.S. service providers from having to tell customers whether authorities have requested their data.

- One lobbying group that represents internet companies is striving for a federal privacy law that would preempt more state regulations like the California Consumer Privacy Act (CCPA), which actually makes real progress. Its ideal federal privacy law would undermine the CCPA to essentially let companies return to business as normal and also make it impossible for other states to set the bar even higher.

What is GDPR, the EU's new data protection law?

- In May 2018, the EU implemented the General Data Protection Regulation (GDPR) which became the new legal backbone on data protection and privacy in the EU.
    - It imposes obligations onto organizations anywhere, so long as they target or collect data related to people in the EU.
        - **The GDPR applies to you even if you're not in the EU**
        - **Fines for violating the GDPR are very high**

What is GDPR, the EU's new data protection law?

- If you process data, you have to do so according to seven protection and accountability principles outlined in **Article 5.1-2**:
  1. **Lawfulness, fairness and transparency** — Processing must be lawful, fair, and transparent to the data subject.
  2. **Purpose limitation** — You must process data for the legitimate purposes specified explicitly to the data subject when you collected it.
  3. **Data minimization** — You should collect and process only as much data as absolutely necessary for the purposes specified.
  4. **Accuracy** — You must keep personal data accurate and up to date.
  5. **Storage limitation** — You may only store personally identifying data for as long as necessary for the specified purpose.
  6. **Integrity and confidentiality** — Processing must be done in such a way as to ensure appropriate security, integrity, and confidentiality (e.g. by using encryption).
  7. **Accountability** — The data controller is responsible for being able to demonstrate GDPR compliance with all of these principles.

What is GDPR, the EU's new data protection law?

- GDPR recognizes a litany of new **privacy rights for data subjects**, which aim to give individuals more control over the data they loan to organizations. Data subjects' privacy rights:
    1. The right to be informed
    2. The right of access
    3. The right to rectification
    4. The right to erasure
    5. The right to restrict processing
    6. The right to data portability
    7. The right to object
    8. Rights in relation to automated decision making and profiling.