

TODAY'S LECTURE WITH BRIAN PATRICK

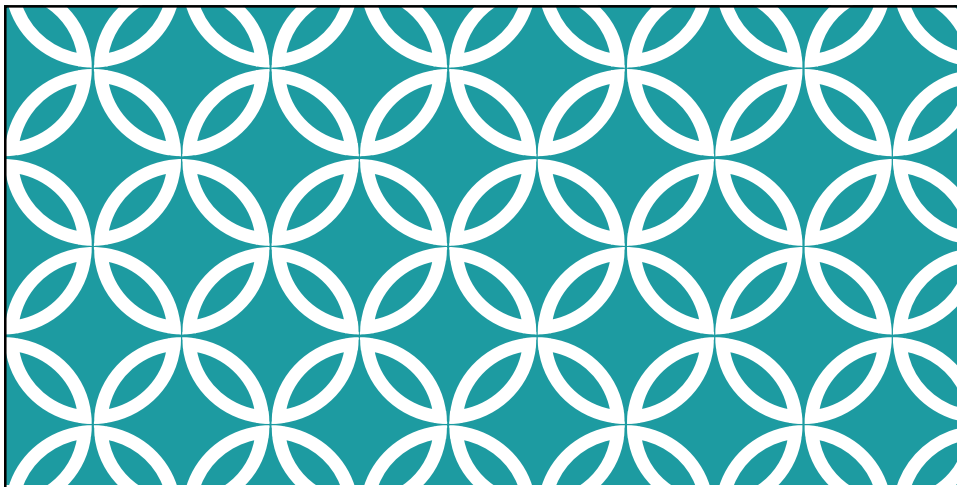
Chapter 8

The Internet

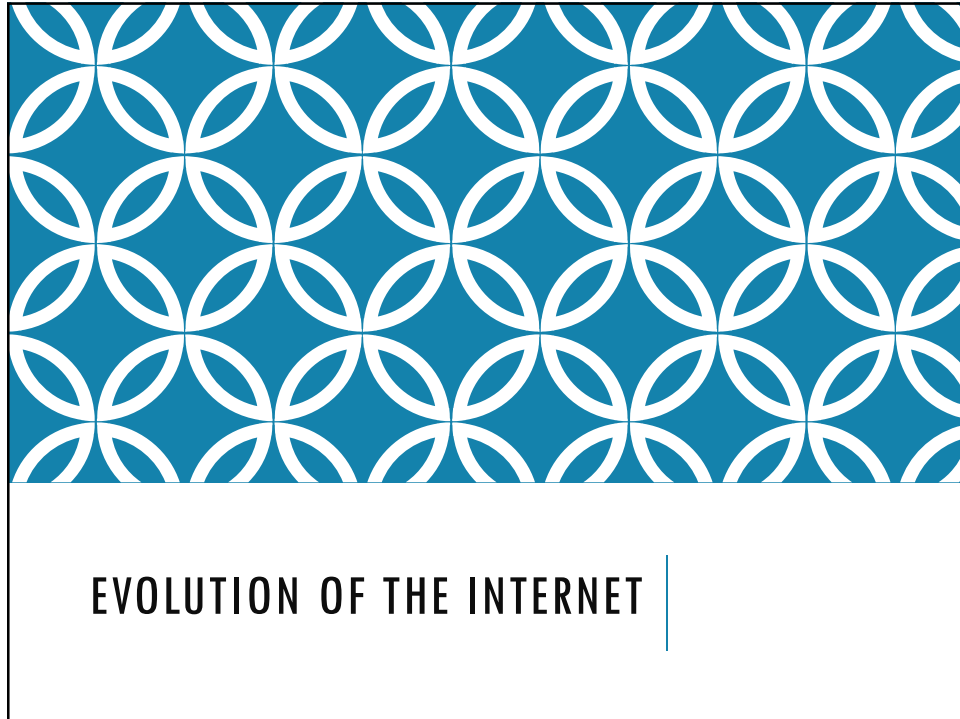
Omit the section on "Getting Set Up to Use the Internet"

Chapter 13

Intellectual Property Rights, Ethics, Health, Access, and the Environment



CHAPTER 8: THE INTERNET

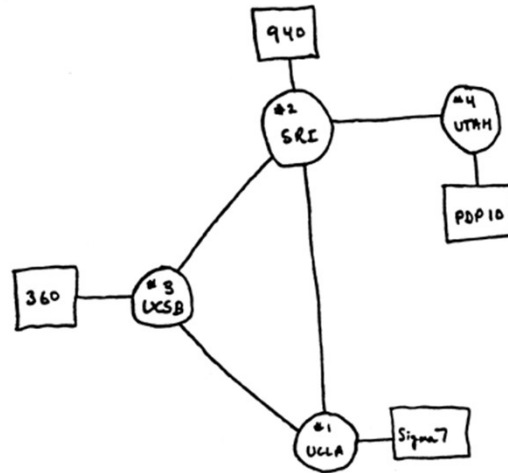


WORLD'S BIGGEST WIDE-AREA NETWORK?

Internet



ARPANET (1969)



COMPANY _____
ADDRESS _____

ENGINEER IN CHARGE _____
COMPUTER SERIAL NO. _____

DATE	TIME	PROBLEM & REMEDY	OPERATOR	DOWNTIME
27 Oct 69	1750	IMPTEST RUNNING - TESTING LINE TO UCSB - LINE IS OPEN SO 'R OK IF COUNTING ERRORS BUT SHOULD STATE COUNTING OF TELCO BITS ARE FIXED. CHARLEY PLEASE CALL BOW AT SRI!	CSK	
29 Oct 69	2100	LOADED UP PROGRAM FOR BEN BARKER BBV	CSK	
	22:30	Talked to SRI Host to Host	CSK	
		Left imp program running after sending a host dead message to imp	CSK	
30 Oct 69	1030	Stopped up prog Started IMPTEST to trace line trouble on TGM (UCSB)	CSK	

CUSTOMER SERVICE

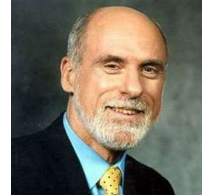
October 29
1969
At 22:30

THE INTERNET “NETWORK OF NETWORKS”

Transmission Control Protocol/Internet Protocol

TCP/IP is based on the idea of **packet switching**

Vincent Cerf



Paul Baran

WORLD WIDE WEB

WWW



THE WEB

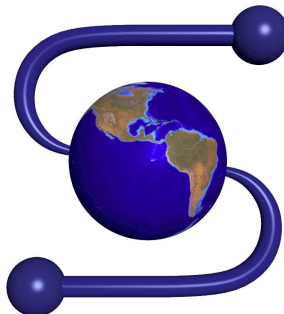


Tim Berners-Lee

System of interlinked documents (**hypertext**, **Web pages**) located on Web servers around the world

Structure and content of a Web page is specified by the **hypertext markup language** (HTML)

WHAT WAS THE FIRST GUI BROWSER?



Mosaic

[illegible]

- Users
- Internet Service Providers (ISPs)
- Content Providers
- Application Service Providers (ASPs - Cloudware)
- Infrastructure Companies
- Hardware and Software Companies

NET NEUTRALITY

“All content is equal”

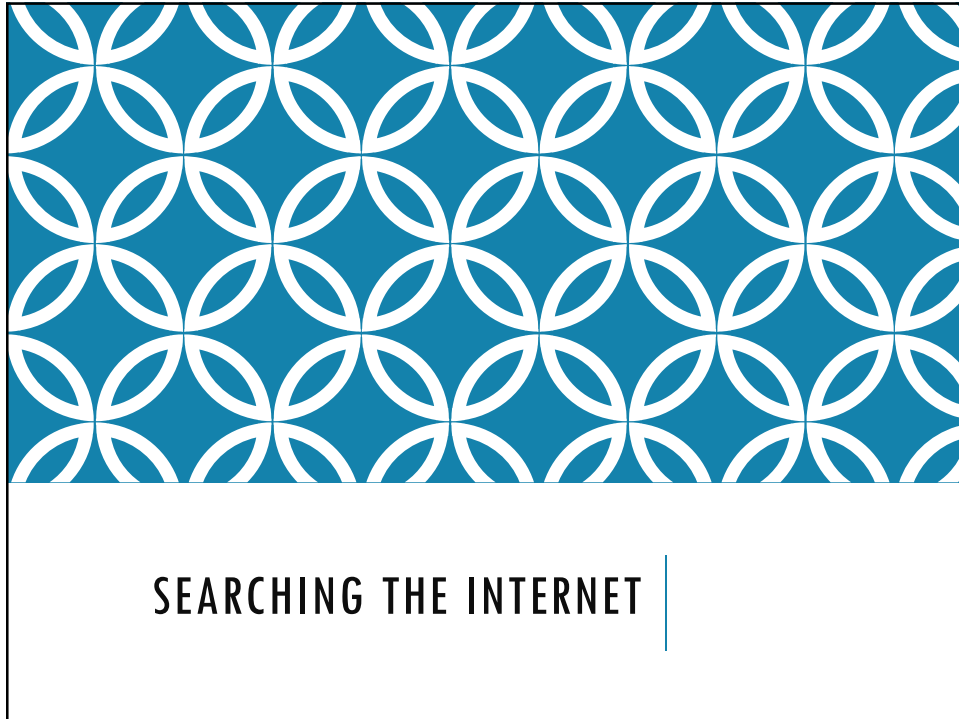
MYTHS



The Internet is free

Someone controls the Internet (ICANN, W3C)


The Internet and WWW are identical



SEARCH ENGINES

Alan Emtage

Archie
World's first search engine



SEARCH STRATEGIES

Keyword	Golden Knights
Phrases	"Golden Knights"
Search operators	Golden Knights -England
Synonyms	
Variants	B&B, "Bed and Breakfast"
Wildcards	hand signal*
Multiple search sites	

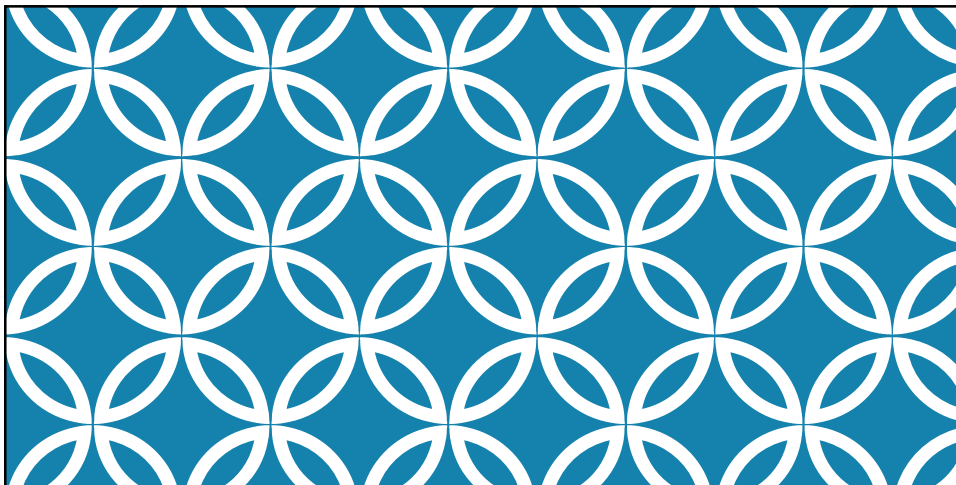
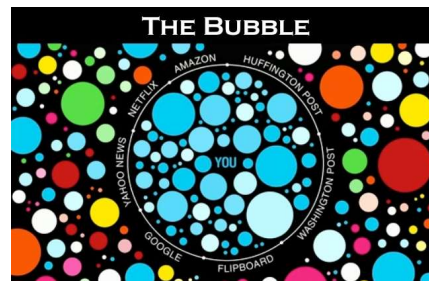
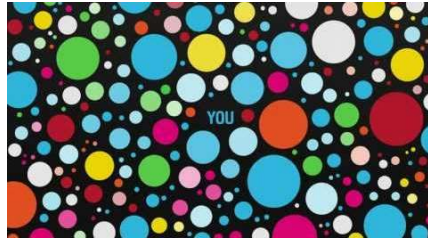
EVALUATION

Is the information reliable or biased?

author, source, date, cross-referencing

fake news 😞

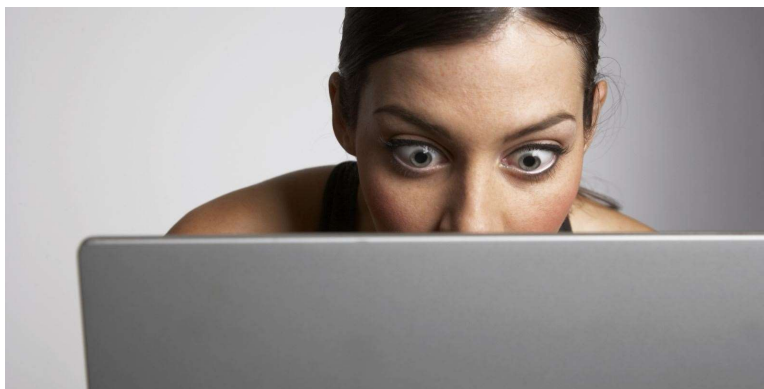
FILTER/INFORMATION BUBBLE



BEYOND BROWSING,
SEARCHING, AND E-MAIL



KNOW YOUR ONLINE PRESENCE



E-COMMERCE

What are the advantages

- for the customer?
- for the business ?

Conducting
transactions online

Major concerns

- Credit card fraud
- Identity theft

How do you protect yourself?

ONLINE ...

Commerce

- Shopping
- Auctions
- Investing
- Banking

Entertainment

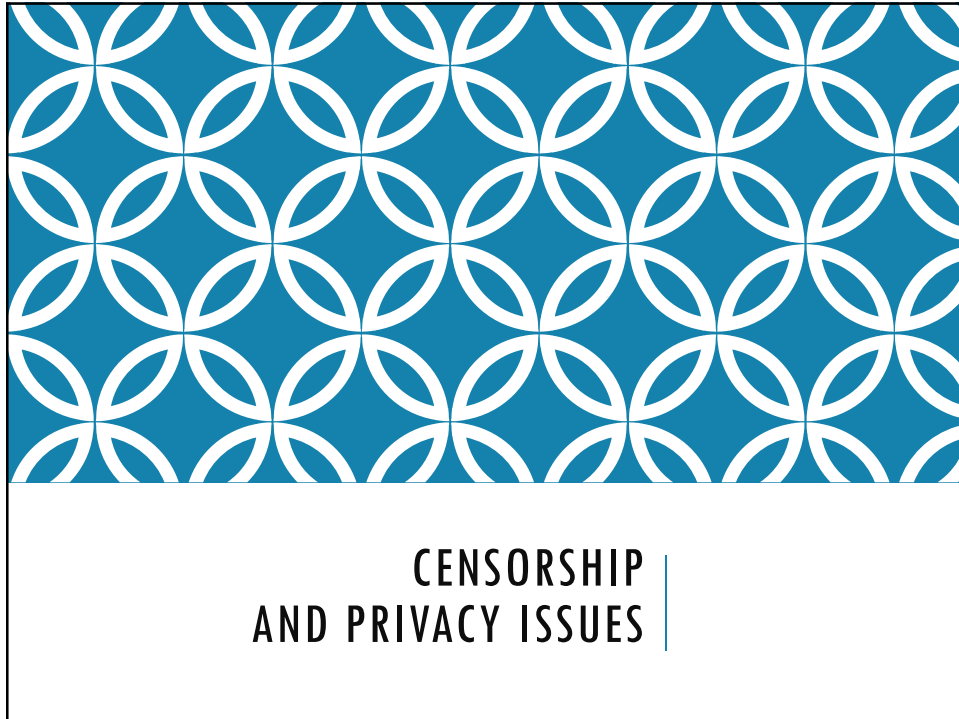
- Music
- TV, Video, and Movies (VOD)
- Gaming (addiction)

News, References, and Information

- RSS Feeds
- Podcasts

Education and Writing

- Blackboard
- Web-based training
- Distance learning
- Online testing (proctoring)
- Blogs
- Wikis
- Your e-portfolio



CENSORSHIP AND PRIVACY ISSUES

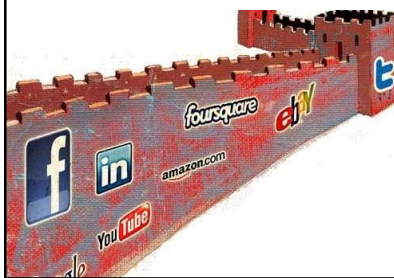
Internet filtering

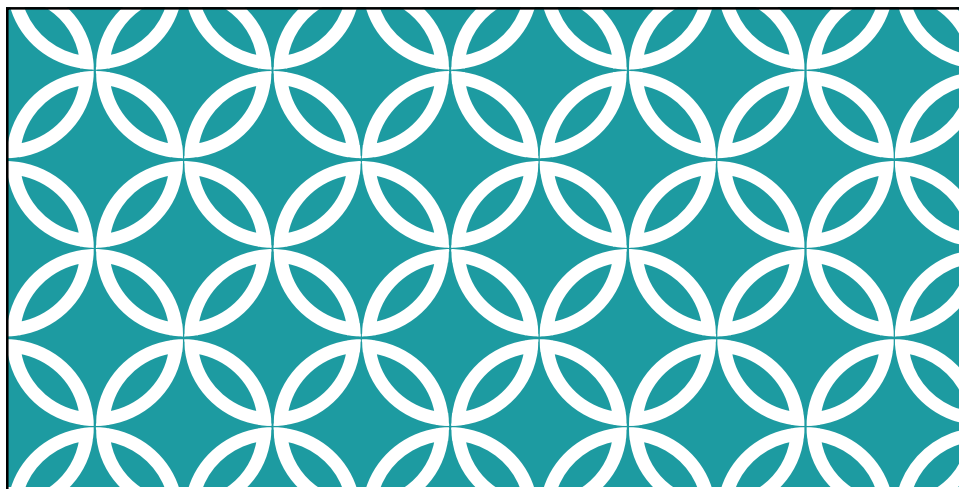
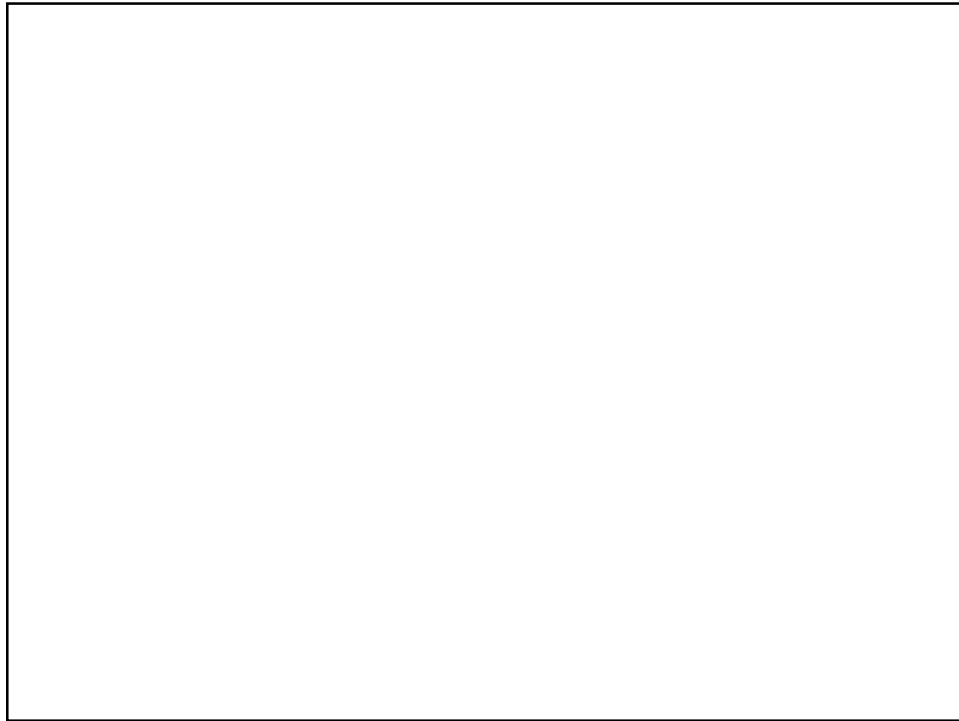
Great Firewall of
China

Cookies (first and third party)

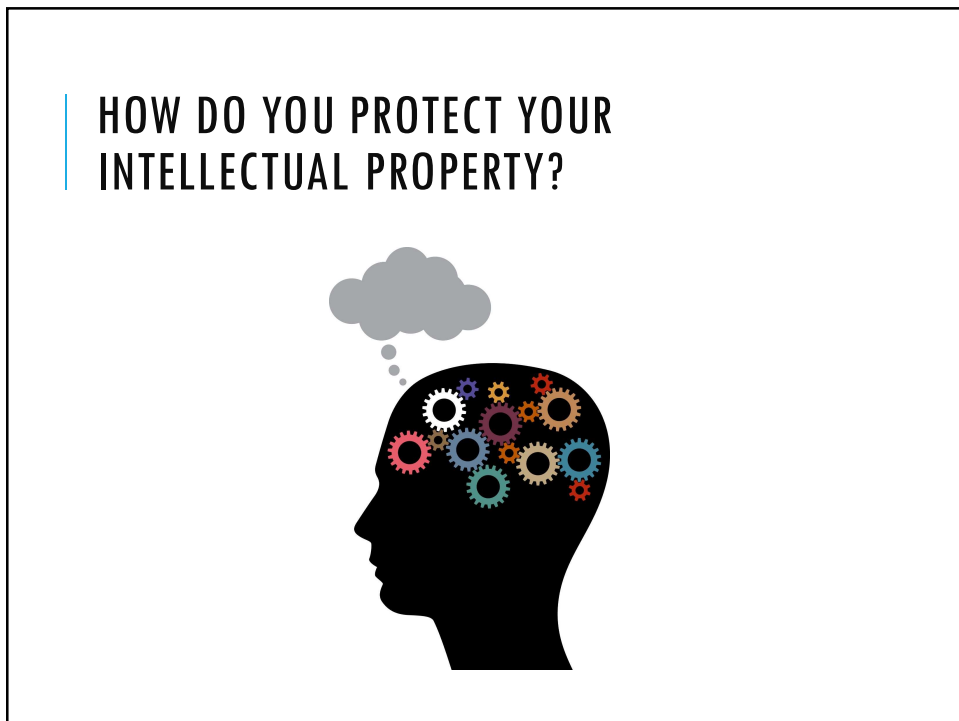
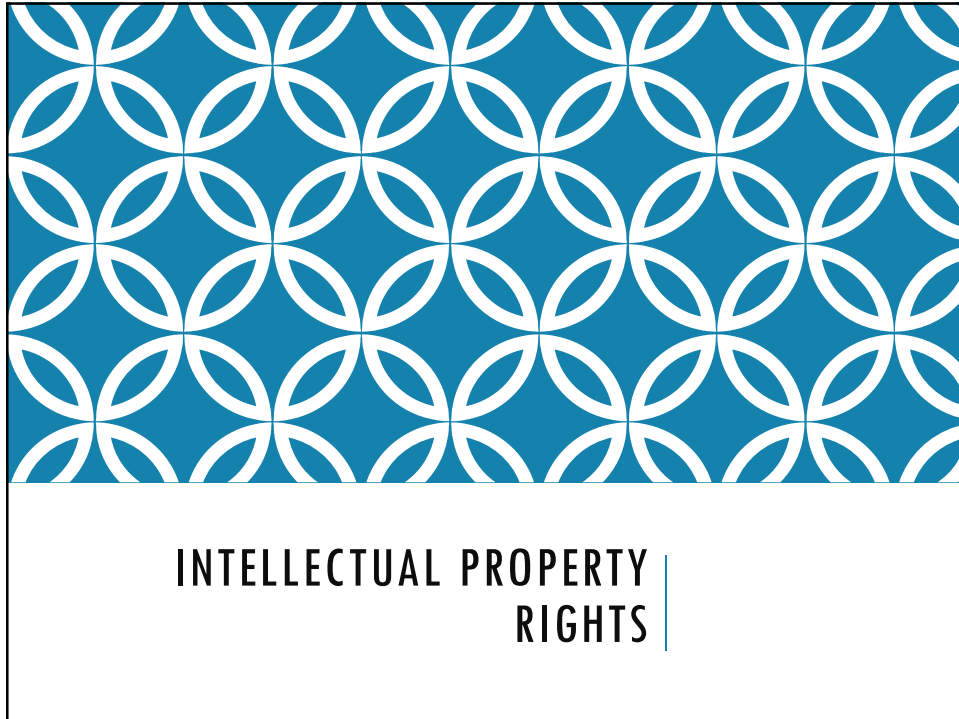
Spyware

Unencrypted email





CHAPTER 13:
INTELLECTUAL PROPERTY RIGHTS,
ETHICS, HEALTH, ACCESS, AND THE
ENVIRONMENT



COPYRIGHTS

Protect original artistic, musical, or literary works such as a book, movie, software program, song, or painting

- Fair use
- Digital watermarks
- Digital Rights Management (DRM)



TRADEMARKS

Protect words, phrases, symbols, or designs that identify and distinguish a product or service

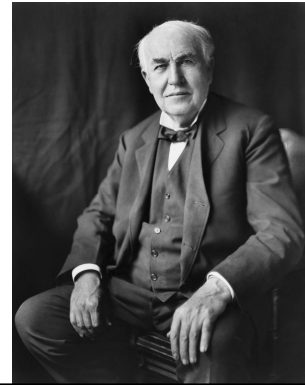
- Cybersquatting
- Typosquatting



PATENTS

Protect inventions by granting exclusive rights of an invention to the inventor

Thomas Alva Edison



WORD TO THE WISE

Be careful what you display/say in a public forum before a patent is granted

Be prepared to invest money to attain and protect patents worldwide



ETHICS

Standards of moral conduct

- Personal ethics
- Business ethics
- Computer ethics

Think of an ethical dilemma for each one

ETHICAL USE OF COPYRIGHTED MATERIAL

Books and Web-based articles

- plagiarism

Music

- peer-to-peer (P2P) sites

E-books

Movies

Software

- malware



PLAGIARISM	NOT PLAGIARISM
A student copying or retyping a few sentences or a few paragraphs written by another author to include in his term paper without crediting the original author.	A student copying or retyping a few sentences or a few paragraphs written by another author to include in his term paper, either indenting the quotation or placing it inside quotation marks, and crediting the original author with a citation in the text or with a footnote or endnote.
A newspaper reporter changing a few words in a sentence or paragraph written by another author and including the revised text in an article without crediting the original author.	A newspaper reporter paraphrasing a few sentences or paragraphs written by another author without changing the meaning of the text, including the revised text in an article, and crediting the original author with a proper citation.
A student copying and pasting information from various online documents to create her research paper without crediting the original authors.	A student copying and pasting information from various online documents and using those quotes in her research paper either indented or enclosed in quotation marks with the proper citations for each author.
A teacher sharing a poem with a class, leading the class to believe the poem was his original work.	A teacher sharing a poem with a class, clearly identifying the poet.

ETHICAL USE OF RESOURCES

Code of Conduct

- Guidelines for the allowable use of company resources such as the Internet, social media, email, computers, and other equipment

Code of Ethics

- Moral guidelines adopted by an industry or organization
- Law, medicine, engineering, computer science etc.

ETHICAL USE OF INFORMATION

Governed by employee confidentiality laws, union contracts, customer privacy

Gray areas

- Data mining
- Selling customer information
- Ownership of work-related social media accounts

CHEATING AND FALSIFYING INFORMATION

Abetted using smartphones

- Texting, camera

Resumé padding

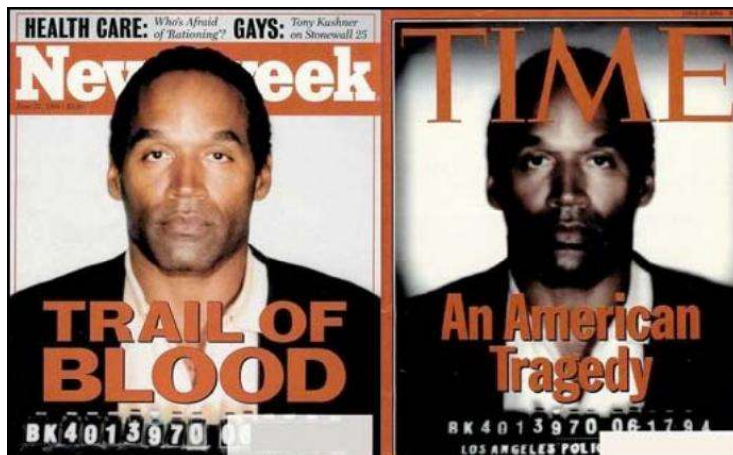
False certifications

Academic Code of Honour

Stanford University Honour Code

(written in 1921)

DIGITAL MANIPULATION



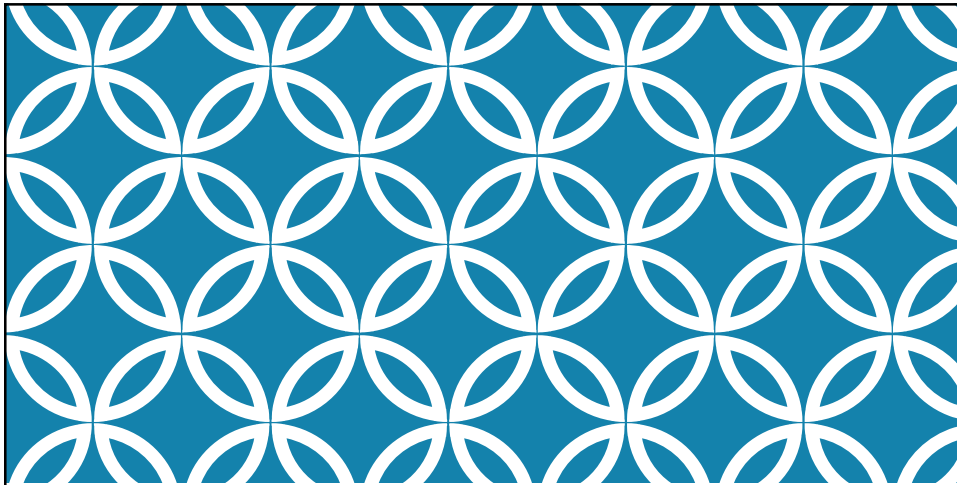
ETHICAL BUSINESS PRACTICES

Ethically questionable products or services

- Age verification
 - Click a statement
 - Provide a credit card
 - Online identity-verification service

Workplace monitoring

- Email
- Social media sites



COMPUTERS AND HEALTH

DOES COMPUTER USAGE HARM YOU ... PHYSICALLY?

Repetitive stress injuries (RSI)

- Carpal tunnel syndrome
- DeQuervain's tendonitis

Computer vision syndrome (CVS)

"Gorilla arm"

"iPad shoulder"

Burns

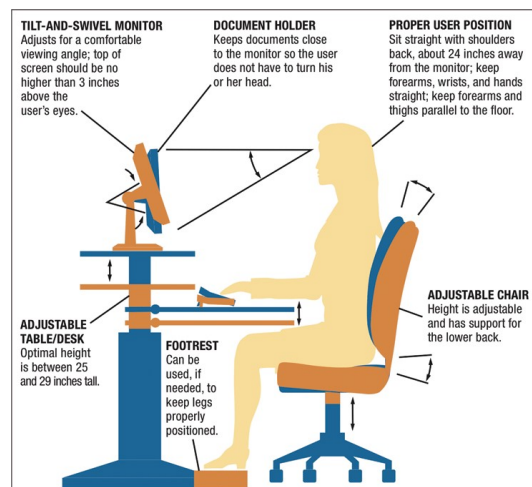
Noise-inducing hearing loss (earbuds)

Texting and driving

Radiation from wireless devices (?)

Poor posture

ERGONOMICS



DOES COMPUTER USAGE HARM YOU ... EMOTIONALLY?

Stress of ever-changing
technology

Impact of our 24/7 society

Information overload

- “Email bankruptcy”

Burnout

Internet/technology addiction

- Texting
- Chat rooms
- Online gaming
- Online gambling
- Online shopping
- Cyberporn

WORD TO THE WISE

Focus

Filter

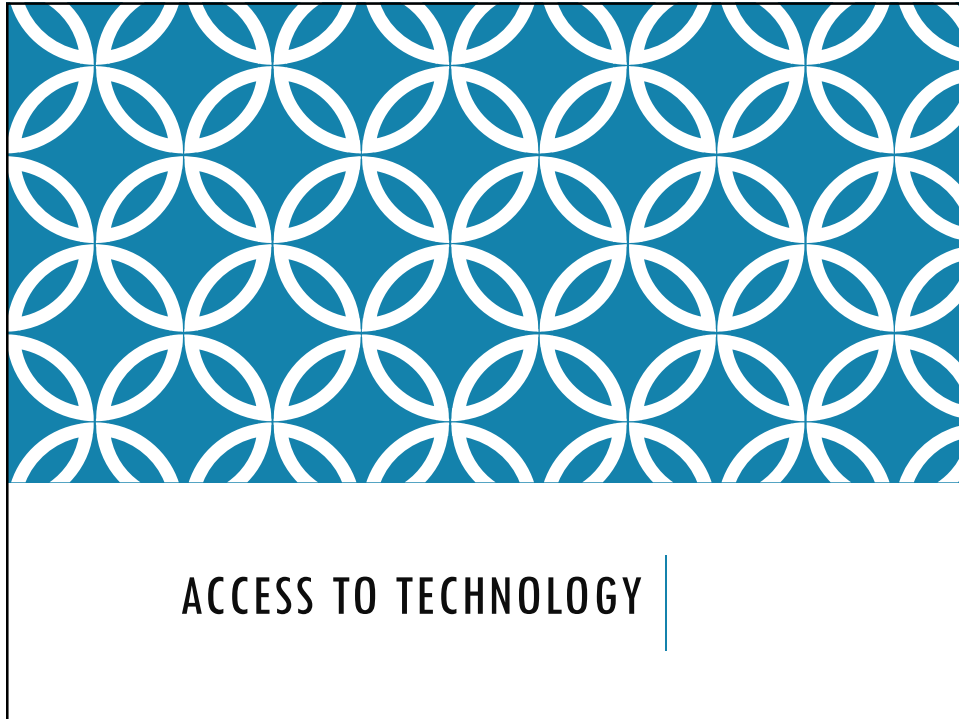
Budget time

Take breaks

Make decisions

Disconnect from the technology; reconnect with people and places

Use technology ... don't let it use you



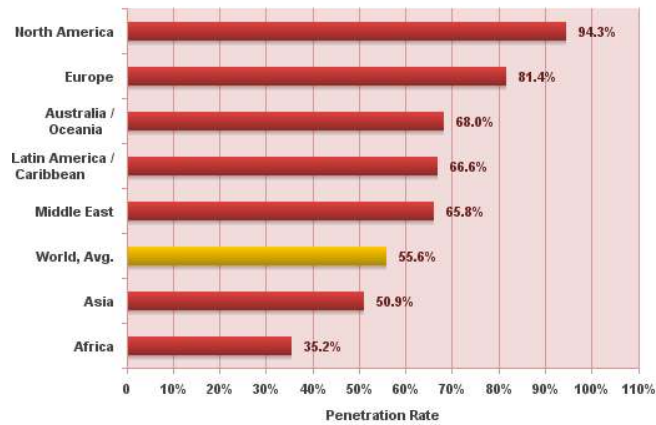
DIGITAL DIVIDE

Is the gap between those who have access to information and communications, and those who do not

One laptop per child (OLPC) project



Internet World Penetration Rates by Geographic Regions - March, 2019



Source: Internet World Stats - www.internetworldstats.com/stats.htm
Penetration Rates are based on a world population of 7,753,483,209 and 4,312,982,270 estimated Internet users in Dec. 31, 2018.
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ASSISTIVE TECHNOLOGY

Input systems:

- Braille keyboards
- One-handed keyboards
- Optical character readers
- Foot-controlled mice
- Head pointing systems
- Eye tracking systems

Output systems:

- Screen reader
- Braille printers
- O/S settings to
 - Magnify the screen
 - Change text size and color



GREEN COMPUTING

Energy consumption and conservation

- Powering down
- Utilizing cloud computing
- Using energy-efficient devices (ENERGY STAR)
- LED displays

Alternate power

- Solar power (thin film panels)
- Solar buildings



RECYCLING AND REUSE

Where does **e-waste** go?



GOOD LUCK WITH THE REST OF THE TERM

See you on

Friday, April 12, 2019 at 8:00am in the Gym