

# CS 121

## Our Digital World

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202 Strain

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# Overview

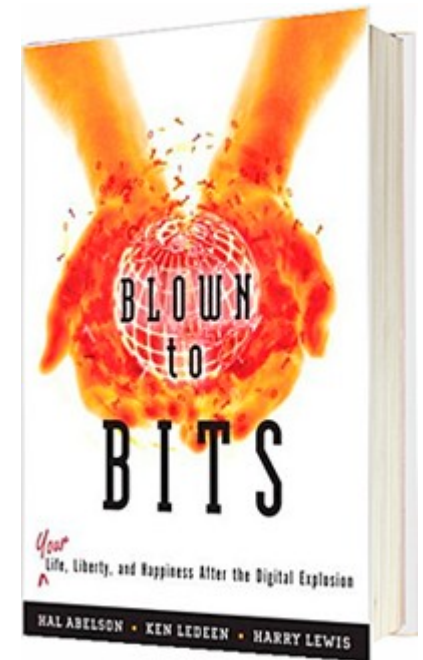
- This is a discussion based class!
  - Come to class prepared
    - Do the readings
    - Research the topics
  - Participate
- I'll provide topics and questions to guide discussions
- Each class will be part lecture/discussion/activity
  - Research/small group discussion/find & present

# Syllabus

Most classes will have a small homework assignment

<http://www.bitsbook.com>

- Find an article on the next topic
- Post on web site brief explanation/commentary
- Blog post - Due Wednesdays



# Success!

- Show up on time for every class
  - Do the readings!
- Take notes
  - Get a binder or folder
  - How to manage electronic resources?
- Don't web surf during lecture.
  - Turn off your cell phone.
- Participate in class discussions
  - Ask questions



[http://static.eway.com/catalog/1/ce05\\_127973\\_pfd.jp](http://static.eway.com/catalog/1/ce05_127973_pfd.jp)

# How to send an effective email

To: chadd@pacificu.edu

From: hall4242@pacificu.edu

Subject: CS121: research topics

Hi Chadd,

I've found three articles on using your smartphone to automatically wash your dog. Does that sound like a good topic for Thursday's discussion?

Thanks,  
Lesley

# Goals

What are you interested in?

- Understand the nature of digital information
- How does the Internet work (history)?
- Form and defend opinions about the impacts of Internet on culture and society
- Appreciate the ethical concerns raised by the Internet/digital technology
- Predict the ways in which the Internet will evolve in the coming years
- Introduction to the fundamentals of computation

# Class Survey

- Let's get down to something practical
- Open up a web browser
- Go to the class web page
  
- Complete the Survey and submit!
  - We'll review the answers in 15 minutes.
  - Anonymous

# Why Our Digital World?

- We interact with computers all the time
  - Why?
  - How?
- What do you use computers for?
- How much of our information is purely digital?



# Analog vs Digital

- What does analog mean?  
5 minute search...
- What does digital mean?  
5 minute search...
- What is an example of analog technology?
  - What analog technology do people use today?
  - What are the strengths of analog?
  - What are the weaknesses of analog?
  - What are the strengths of digital?
  - What are the weaknesses of digital?

# Bits

- Define bit
- How much data can one bit store?
- How much data can two bits store?
- What type of data can two bits store?
- How much data can three bits store?

Bit  
Byte  
Megabyte  
Gigabyte  
Terabyte  
Petabyte  
???

# It's all just Bits

- Can all information/data be turned into bits?
- Why is this important?
- What types of information do people typically want to control access to?

# Perfection is normal

- What is a perfect copy?
- What is an imperfect copy?
- Why are perfect copies possible now?
- Why do people care about the quality of the copy?

# There is Want in the Midst of Plenty

- What happens if your information is not digital?
- What happens if the information you want is not digital?
- How hard is it for you to access non-digital information in the library?
- How do you perform your research for research papers?

# Activity

- What was the headline in the Washington Post today?
- What was the headline in the Washington Post on July 1, 1976?
- Or the Oregonian or your home town newspaper.

# Google Sites Activity

# Today's Blog Post

- Linked on the class web page
- Read the article
- Write a small summary on your blog
- Questions:
  - What does the article mean by “The Internet never forgets... [b]ut it erases with ruthless efficiency”?
  - how many links in the article don't work?
  - what online storage sites do you use?
  - how much of your information is only online?
    - which online site shutting down would cause you to be the most “wrecked”?
    - which online site shutting down would cause future researchers the most difficulty?
- Discuss your blog post with your neighbor.

<https://www.youtube.com/watch?v=eqsMpAOI9EA>



# Pacific's website

- <https://archive.org/web>
- What does Pacific's first website look like?
- What did Pacific's website look like in 2000?
-

# Computer Basics

- Hardware
- Software
- Operating System
- Network
  - The “Cloud”

# Next time...

- Read Chapter 1 by Wednesday
- Read the Appendix by Monday, p 301-316
- How does the Internet work?
- Why is it important to understand
  - networking
  - web browsing
  - email
  - http, https, ....

- recent topics
  - russian hacking of elections
  - electronic voting machines
  - credit card number theft (identity theft)
  - net neutrality
  - crowd sourcing
    - kickstarter, etc
  - Wearable computing
  - Augmented Reality

# Discuss two articles in small groups

- Each group reports out one finding
  - Which article was more interesting? Answer the following questions as a group for that article.
- 
- Analog vs Digital
    - What is the difference between analog and digital?
    - What are the trade offs between the two?
    - Why has digital become popular?
    - Why/where has analog made a come back?
  - Archive
    - What does the article mean by “The Internet never forgets...[b]ut it erases with ruthless efficiency”?
    - How much of your information is only online?
    - Which online site shutting down would cause you to be the most “wrecked”?
    - Which online site shutting down would cause future researchers the most difficulty?