

## CS144 – Introduction to Computer Networking

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<http://cs144.scs.stanford.edu/>

### Administrivia

- All assignments are on the web page
- Text: Kurose & Ross, *Computer Networking: A Top-Down Approach, 4th or 5th edition*
  - Instructors working from 4th edition, either OK
  - Don't need lab manual or Ethereal (used book OK)
- Syllabus on web page
  - Gives which textbook chapters correspond to lectures (Lectures and book topics will mostly overlap)
  - Extra (not required) questions for further understanding
  - Papers sometimes, to make concepts more concrete (Read the papers before class for discussion)
  - Subject to change! (Reload before checking assignments)

### Grading

- Exams: Midterm & Final
- Programming labs
  - 5 lab assignments implemented in C
  - If you are not comfortable with C and gdb they will be painful
- Two writing homework assignments
  - One question each week, pick 2
  - Opportunity to rewrite and resubmit based on feedback
- Administrative handout has details on grading, please put questions on Piazza

### Networks class

- Goal: Teach the concepts underlying networks
  - How do networks work? What can one do with them?
  - Give you a basic understanding of the Internet
  - Give you experience using and writing protocols
  - Give you tools to understand new protocols & applications
- Prerequisites:
  - CS110 or equiv; class assumes you are comfortable with C and gdb, some socket programming helpful (e.g., CS110 web server)

### Online Resources

- Old school web page: <http://cs144.stanford.edu>
- We use Piazza for assignments: please send all assignment questions there
  - Link on <http://cs144.stanford.edu>
  - Piazza allows you to answer questions and rate answers
- Send all staff communication to staff list
  - Goes to whole staff, so first available person can respond
  - CC'ing list ensures we give students consistent information
  - Also, some of us get lots of email... much easier for us to prioritize a specific mailing list

### Labs

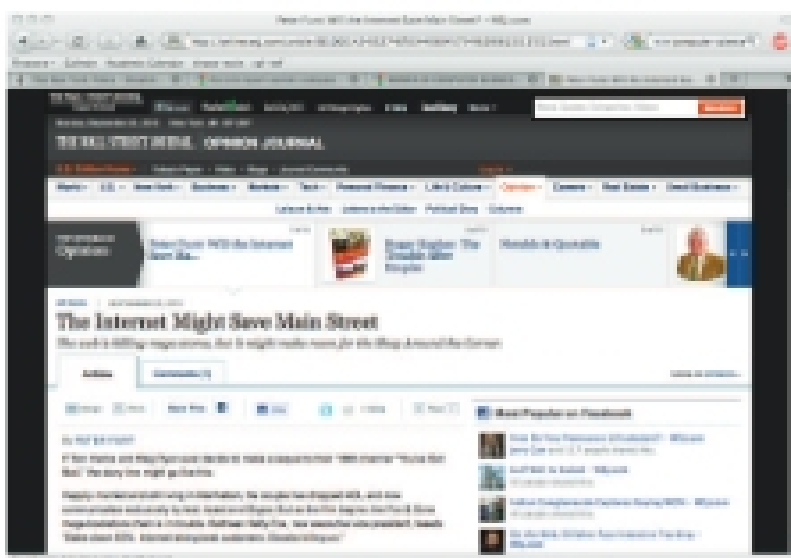
- Labs are due by the beginning of class
  - Lab 1: Stop & wait
  - Lab 2: Reliable transport
  - Lab 3: Static routing
  - Lab 4: Dynamic routing
  - Lab 5: NAT
- Most assignments due at start of Wednesday lecture
  - Late policy: can turn in late until 8:59PM that Friday, grade capped at 90%
  - Lab 1: Due at start of Monday lecture, late is 8:59PM on Wednesday

## Section

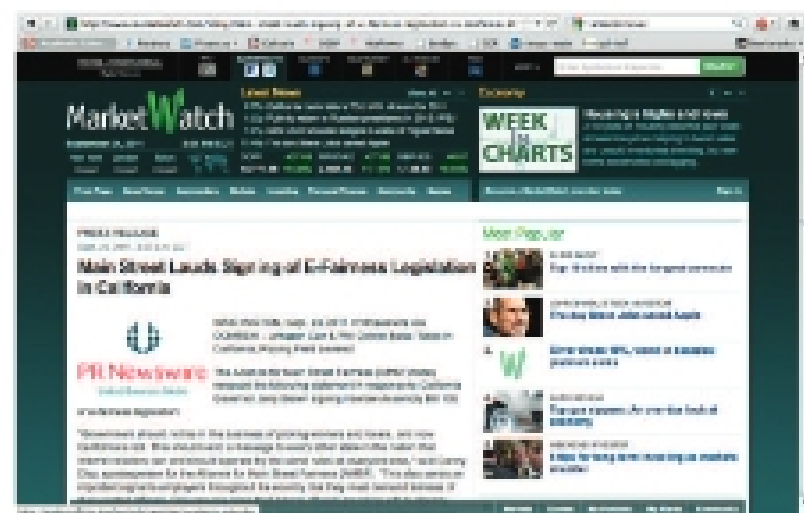
- Place and time TBA
- Led by TAs and section leaders
- Practical assignment help and guidance
- This week: gdb tutorial

## Why You Should Care About the Internet (just 12 months)

### Societal Change 2010



### Societal Change 2011



### Political Change 2010



### Political Change 2011



## Political Change by Force

The screenshot shows a news article on the WIONO website. The main headline is "Iran: Computer Malware Sabotaged Uranium Centrifuges". Below the headline is a photograph of a desert landscape with several small, simple buildings. The article text is partially visible, mentioning "Iran's nuclear program" and "sabotaged uranium centrifuges". The website's navigation bar includes "HOME", "ABOUT", "CONTACT", "SEARCH", and "REGISTER".

## Economic Change

The screenshot shows a presentation slide titled "Income Share". It features a line graph with a dark background and light-colored lines. The graph plots income share over time, with labels for "Great Compression" and "Great Divergence". The "Great Compression" period is marked with a downward arrow, and the "Great Divergence" period is marked with an upward arrow. The graph shows a significant increase in income inequality during the "Great Divergence" period. The slide also includes text on the left and right sides, and a footer with the name "Thomas Piketty and Emmanuel Saez" and the title "The Great Divergence in Income Inequality".

## More Economic Change

The screenshot shows a news article on the BBC website. The main headline is "Superpowers: Who's taking the lead?". Below the headline is a photograph of a person. The article text is partially visible, mentioning "the United States" and "China". The website's navigation bar includes "HOME", "NEWS", "SPORTS", "LIFE", "ARTS", "SCIENCE", "TECH", "BUSINESS", "HEALTH", "TRAVEL", "FOOD", "OPINION", "ANALYSIS", "VIDEO", "AUDIO", "PHOTOS", "GALLERY", "INTERACTIVE", "SERIES", "DOCUMENTARIES", "SPECIALS", "ABOUT", "CONTACT", "SEARCH", and "REGISTER".

## Educational Change 2010

The screenshot shows the MIT OpenCourseWare website. The main headline is "Unlocking Knowledge, Empowering Minds." Below the headline is a photograph of a person. The website's navigation bar includes "HOME", "COURSES", "ABOUT", "CONTACT", "SEARCH", and "REGISTER". The website also includes a sidebar with "NEW COURSES" and "FEATURED COURSES".

## Educational Change 2011

The screenshot shows a course page for "Introduction to Databases". The page includes a title, a description, and a list of topics. The description mentions "This course covers the fundamental concepts and techniques for designing, implementing, and maintaining database systems." The list of topics includes "Introduction to Databases", "Relational Database Design", "Query Languages", "Database Systems", "Database Security", and "Database Performance".

## Dominance in Technology Today

The screenshot shows a technology news website. The main headline is "The Google Glass". Below the headline is a photograph of a person wearing Google Glass. The website's navigation bar includes "HOME", "NEWS", "ABOUT", "CONTACT", "SEARCH", and "REGISTER". The website also includes a sidebar with "NEW TECHNOLOGY" and "FEATURED TECHNOLOGY".