CS 100

Tuesday

13 October 2015
Today’s Agenda

0. Announcements and Calendar Review
1. Guest Speaker: Mr. Lucas Cockerham
2. Team Geek Reading: Every Boat Needs a Captain (Ch. 3)
3. Group Project Assignments and Preview
4. Convergence: Media and Computing
0. Announcements and Calendar

• Quiz 1:
  – 20 October: Next week!
  – Organize your notes
  – Online quiz study guide (one pager)
  – Will review before quiz; quiz will take place at the beginning of class, after the review

• Office hours
  – Tuesday 1-3 and Wed 10-12
  – Other times by appointment
Mr. Lucas Cockerham

• Development Manager, Hewlett Packard
• MS in Computer Science
  University of Kentucky
• BS in Computer Science
  Eastern Kentucky University
• Prior experience at ACS/Xerox
Reading from “Team Geek”

Chapter 3: Every Boat...
Group Project Preview

• Project Launch: Tonight

• Due dates for phases
  – Phase 1: due Tues 10/27
  – Phase 2: due Tues 11/10
  – Final: due Tues 11/24

• Team assignments announced at Launch
Media and Computing

“The average TV commercial of sixty seconds has one hundred and twenty half-second clips in it, or one-third of a second. We bombard people with sensation. That substitutes for thinking.”

— Ray Bradbury, Fahrenheit 451
What is Media?

“Mass Media” is a group that constructs messages with embedded values, and that disseminates those messages to a specific portion of the public in order to achieve a specific goal.
Breaking it Down: Media

- Group
- Messages
- Embedded values
- Dissemination
- Specific audience
- Specific goal
Classic Member of the “Mass Media”

• Newspapers
  – Group: reporters/editors
  – Messages: the news
  – Embedded values: to inform, educate, entertain
  – Dissemination: newsprint
  – Specific audience: adults who read newspapers
  – Specific message: “all the news that’s fit to print”
Companies like Google, Facebook, EA Games are both computer technology companies and members of the mass media...

- Group: gaming companies
- Messages: game narrative
- Embedded values: to entertain
- Dissemination: computer disks; computer networks
- Specific audience: those who play video games
- Specific message: “it’s in the game”
It’s In The Game!

• [http://www.youtube.com/watch?v=CczsKvR_9Hs](http://www.youtube.com/watch?v=CczsKvR_9Hs)
Computation and Transformation

Media has been transformed by the technical advances of computation

• Group: Computer companies
• Messages: interfaces, images, video, web pages, game narratives, consoles, google glass
• Embedded values: interactivity, sharing personal information, privacy
• Dissemination: the Internet, the Cloud
Computation and Transformation

• Specific audience: anyone with a wireless network connection, globally
  – Project Loon
    http://www.youtube.com/watch?v=0wPvd3EJ7mg
    https://www.youtube.com/watch?v=HOndhtfIXSY

• Specific message
  – Entertainment
  – News
  – Twitter “tweets”; hashtag
  – Advertising (google Adwords)
Hashtags

- http://www.youtube.com/watch?v=57dzaMaouXA
Software is Supreme

http://online.wsj.com/article/SB10001424053111903480904576512250915629460.html

Why Software is Eating The World (Marc Andreessen, WSJ)

Amazon, Netflix, Skype, Apple, Zynga, EA, Nintendo, Google – all are “software companies”
The Auto Industry

• In-dash navigation
Self-Driving Cars

- http://www.youtube.com/watch?v=cdgQpa1pUUE
- https://www.youtube.com/watch?v=CqSDWoAhvLU
Breaking Down the Technology

• “Embedded messages”: images, video, interactive interfaces
  [Hardware support: smart phones, wearable computing, notebook computers, ...]
The Digital Image

• Computer “graphical user interface” (GUI)
• Photography
• “Camera-ready” printing
• Rendered widgets
  – Clocks, calculators, apps, games
• Film and games: Computer-Generated Imagery (CGI)
Underneath the Digital Image

• The Graphics Rendering Pipeline
  – OpenGL
  – nVidia
  – Texture mapping
  – Ray tracing

• CGI
  – Modeling
  – 3D acquisition
  – Animation
Academy Award

• [http://www.youtube.com/watch?v=UUNYCGZMtI8&list=PLC96B04D8E5355EF1](http://www.youtube.com/watch?v=UUNYCGZMtI8&list=PLC96B04D8E5355EF1)
Underneath the Digital Image

• Photography
  – Mobile computing
  – High dynamic range imaging

• Streaming
  – Video on demand
  – Bandwidth-efficient encodings / codecs
  – Editing and post-capture effects
Street View Hyperlapse

- http://www.youtube.com/watch?v=ngdAF_QFvRc
Underneath the Digital Image

• Novel Compositing
  – “augmented reality”
  – Location-aware computing
  – Heads-up navigation

• Interactive User-Interfaces
  – Agents
  – Embedded computing
Sports

- https://www.youtube.com/watch?v=VhymlZo1kK8
- http://www.youtube.com/watch?v=4iyoU95UZRE
- http://www.sportvision.com/media/passtrack
- http://www.sportvision.com/media/pitchfx-how-it-works
- http://www.sportvision.com/media/tbs-enhanced-pitchfx
Breaking Down the Technology

• “Dissemination”: computer networks, cloud computing, residential fiber, streaming codecs

• “Specific audience”: social networks, advertisement placement
Adwords

• http://www.youtube.com/watch?v=umL3CTEbmdw&list=PL28D81F8088CD3D88
Story Telling

• The “specific message” in mass media has always been embedded in compelling story-telling

• Now computing has transformed story-telling opportunities
Story Telling

- Blogs
- Tweets
- Social networks (FB, G+, myspace)
- Youtube, vimeo
- Flickr, etc.
- Cultural institute
Gaming

• [http://www.youtube.com/watch?v=PEQ-Eg1tf-U](http://www.youtube.com/watch?v=PEQ-Eg1tf-U)
NY Times

• http://www.nytimes.com/projects/2012/snow-fall/#/?part=tunnel-creek
TakeAways

• Convergence between mass media and computation
• Software is king
• Content is queen
• Story still reigns supreme
• The software engineer must be multi-talented: Technically accomplished and a problem-solver, and also a great communicator who understands story