

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”

Big Ideas: The New Media

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

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/
SB100014240531119034809045765122509156294
60.html](http://online.wsj.com/article/SB10001424053111903480904576512250915629460.html)

Why Software is Eating The World (Marc
Andreesson, 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>



[mellow music]

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>

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=VhymIZo1kK8>
- <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)
- Tumblr: <http://www.tumblr.com/tagged/popular-page>
- Youtube, vimeo
- Flickr, etc.
- Cultural institute

Gaming

- <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**