LCC 6650 eTV Project Studio

Tuesdays Thursdays 4:30-5:45
TSRB 322 (PenLab) and TSRB 113 (Game Lab)

Prof. Janet Murray
TSRB 320A
Office hours Monday 4-6
Janet.murray@lmc.gatech.edu

Lab Manager
Ricky Yu

General Course Description

This course explores the design possibilities at the intersection of complex storytelling and emerging platforms of digital media including eTV, simulation games, and virtual/augmented reality. Students investigate the design space by analyzing existing artifacts, running surveys, and doing user testing, as part of the semester-long process of designing 3 or 4 group prototypes that we demo will be demo-able by the end of the semester and documented in slide presentations, posters, a final video, and often in conference presentations or journal papers. Prototypes may run on existing technologies or they may involve experimental software and/or hardware environments of our own creation.

The fundamental question this Project Studio addresses is how interaction design for emerging computational technologies can allow us to create, experience, and share more complex forms of storytelling.

Learning Outcomes

M.S. TOP LEVEL

Demonstrate the ability to devise, design, create, and assess prototypical digital media artifacts, services, or environments and to contextualize them within recognized traditions of practice.

M. S. SECONDARY LEVEL

Knowledge

- Formally identify digital media design elements, such as interface conventions, processing strategies, and information structures.

Comprehension

- Ability to explain, give examples of, and defend one's use of formal digital media design terminology

Application

- Demonstrate use of digital media to create prototypes
- Demonstrate good time management skills
- Demonstrate ability to set realistic goals

Analysis

- Can develop interactive media artifacts

Synthesis

- Can design and create digital artifacts that create the experience of agency for the interactor.
- Can design and create digital artifacts that segment and tag media to create meaningful organizational units.
- Can communicate, coordinate, and work productively as a team member.

Evaluation of Works

- Can justify the design choices in their works
- Can formulate and test design hypotheses

PHD Learning Objectives
all the items in the MS Learning Objectives above PLUS

PhD TOP LEVEL

- Students can identify and analyze a domain within the field digital media and identify areas for original contribution as well as methods to pursue these contributions.
- Students can formulate original interpretations and design original prototypes that reflect an understanding of the humanistic context of digital media.

PhD SECONDARY LEVEL

Knowledge

- Identify the historical and cultural roots of digital media

Synthesis

- Demonstrate ability to conduct original research in support of designing new genres and forms of digital media
- Demonstrate ability to conduct original research in support of assessing and / or critiquing new genres and forms of digital media

General Policies

Students are expected to indicate the source and authorship of any work not original to them.

Students are expected to come to class prepared and actively respond to presentations by the instructor and fellow students. Students are encouraged to bring their laptops to class, and are always welcome to look up information related to the discussion during class.

All students will have access to the PenLab in TSRB 322 and Game Lab in TSRB 113 and are expected to abide by the rules of that lab, including never propping open doors or leaving the room empty and unlocked.

There is zero tolerance for discrimination or harassment on any basis, including but not limited to race, color, religion, sex, national origin, age, disability, sexual orientation, gender identity, or veteran status. Georgia Tech is committed to providing its staff, faculty, and students the opportunity to pursue excellence in their academic and professional endeavors. This opportunity can exist only when each member of our community is assured an atmosphere of mutual respect. Georgia Tech's full anti-harassment policy is online here: http://www.policylibrary.gatech.edu/anti-harassment-policy

Students in need of Learning Accommodations: Any student who feels that they may need an accommodation for any sort of disability, please speak to me after class or come see me in my office hours so we can discuss alternative strategies. Georgia Tech support services are available through the Office of Disability Services of the Dean of Students Office, as described here: http://disabilityservices.gatech.edu.

Attendance Policy Students are expected to attend every class meeting and to participate actively in the design discussion. Students are expected to fulfill the development schedule as developed by the team, and to make their work available in a timely manner that supports the overall team effort

Readings

Brenda Laurel
"What is Virtual Reality" https://medium.com/@blaurel/what-is-virtual-reality-77b876d829ba

Janet Murray "Not a Film and Not an Empathy Machine "
https://immerse.news/not-a-film-and-not-an-empathy-machine-

Janet Murray How Close Are We to the Holodeck?

Videos
"Thresholds of Reality: Creating Coherent Enchantment in VR (NYU 2017)
Thresholds of Reality: Creating Coherent Enchantment in AR I Janet Murray I AR in ACTION NYC (Links to an external site.)Links to an external site.

Who's Afraid of the Holodeck?
https://www.youtube.com/channel/UCJPPEt6e10-mmkOreS1oCiw

(other references will be added based on semester-specific issues)

Grading

Students will be given specific project tasks and responsibilities, such as coding, visual design, project management, and will report weekly on progress. Students will formally assess themselves and one another on their contribution to collaborative projects.

Project Development 60% for collective accomplishment and 20% for individual contribution as witnessed by instructor, documented by the student, and reported by teammates.

Individual Contributions to class includes individual assignments, creative ideas, technical contributions to the group, constructive participation in class including response to other classmates' and other teams' presentations 20%

Required IRB Training: http://researchintegrity.gatech.edu/irb-required-training Follow links to complete CITI training for Social and Behavioral Research with Human Subjects. Must be completed by the end of Week 4. This is a pre-req of doing the user testing which you must all participate in.

Schedule

Details of assignments will be on the Project Studio Canvas site under Discussions and all assignments and project documentation should be handed in there by linking to longer files. You can upload files or host them elsewhere, but if you host on google docs please make sure your permissions are set to public..

Week 1 Review of recent prototypes of this group

Week 2 Preliminary Proposals for interaction design of one moment of dramatic agency in AR or VR

Week 3 Revised extended storyboard incorporating at least 2 other proposals from last week

Week 4 Group Formation and begin preliminary development (IRB certification must be completed by end of this week)

Week 5 Group Storyboard Proposal with development schedule ; continued project development

Weeks 6 Refinement of Storyboard and Schedule – Mockup of one interaction

Weeks 7 Continued Development – prepare poster and perhaps sample interaction for GVU 10/10

Week 8 (fall recess 10/9) GVU Open Lab Demo Day 10/10 debrief together on Thursday 10/11

Week 9 Prototype v1 Internal Testing (classmates)

Weeks 10 Prototype v 1: results from user testing and revision ("mid" term team evaluations due)

Weeks 11 Revised Poster; v. 2 Prototype testing

Week 12 Analysis of user testing and revision

Weeks 13/14 Final Project Development Revised poster and prototype; v. 4 of prototype ready for testing

(Thanksgiving break)

Week 15/16 Final Projects and Posters Due Final Demo and write-up of user testing and design process, posters , video, web page added to eTV site.

(maybe an additional public demo day/celebration during finals week)

Resources

15 Microsoft compatible mixed reality headsets
10 Mobile phone devices (Android)

1 ViVE room-scale set ups in Room 322
2 Oculus room-scale set ups in Room 113
1 Oculi set up in Room 322
2 HoloLens
1 Samsung Odyssey

2 AMD machines optimized for VR in Room 113
1 equally fast machine in 322
Another good enough machine in 322

For intro to the Microsoft development environment
see http://aka.ms/mixedreality

Unity tutorials (recommendations to come from Josh Fisher)

Recommended AR platform: ARKit

Modeling tutorials on Lynda for Blender (Ricky will have more information)

NOTE: We are part of the Oculus Next Generation Program
NOTE: We are in a relationship with Microsoft mixed reality as well

Oculus store – download free VR applications and try them out