Setting Up and Running a Games User Research (GUR) Class

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GDC EDUCATION SUMMIT

GAME DEVELOPERS CONFERENCE
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EXPO DATES: MARCH 19–21
2014

What is GUR?

- Combination of (evolving) methods to explore users' experiences of games
  - Much more than usability

- Goal = collect *unbiased* data to make games better

Why is this important?

- Games **have** to provide a good experience
    - Productivity tools = *outcome* is tangible
    - Games = *outcome* IS the experience

GUR Helps Games Succeed

- "*Halo 3*: How Microsoft Labs Invented a New Science of Play" – Thompson (2007), Wired

"Bungie fixed the terrain to keep players from backtracking"

http://www.wired.com/gaming/virtualworlds/magazine/15-09/ff_halo?currentPage=all

GUR is Growing

- Big studios do it
- Top games have no reported major usability issues
  - http://www.**stevebromley**.com/blog/2014/02/24/how-important-is-games-usability-to-reviewers/

GUR Course

- Aimed at Juniors (undergrads)
- Co-designed with Jose Zagal
- REQUIRED in the design track as of 2012
- Pre-req: Basic stats + CITI cert by week 4
- 1x a week for 3-hours + 15 minute break

DePaul's Game Program

- 315 – Undergraduate
  - 179 - Design
  - 126 – Programming
  - 10 – Non-declared
- 53 MS Game Development

Takeaways

- What you need to set up a course like this at your institution
  - Lab/Equipment
  - Topics & methods we cover
    - Highlight how to scaffold the students so they are conducting studies on their own
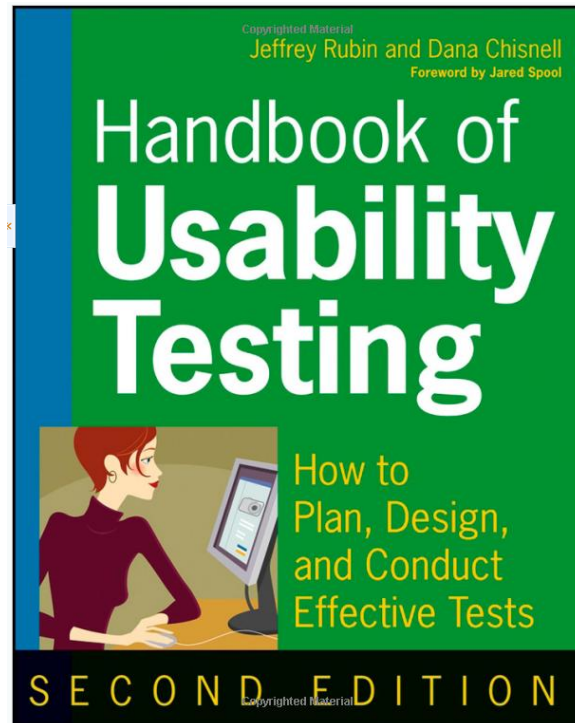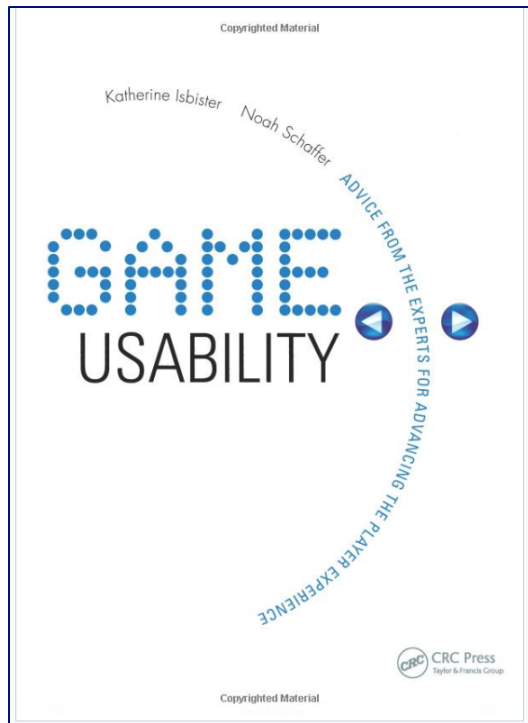
(actual students)

(not actual student)

Overview

- The basics
- Equipment & labs
- Game selection
- Topics & methods we cover
- Post mortem

Texts

Course objectives

- Understand several methods used to evaluate games
  - Strengths/weaknesses of each
  - When to use them in the dev. process
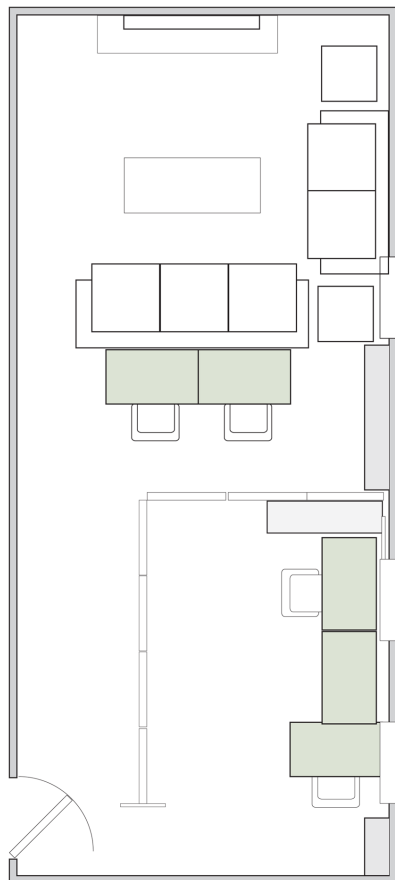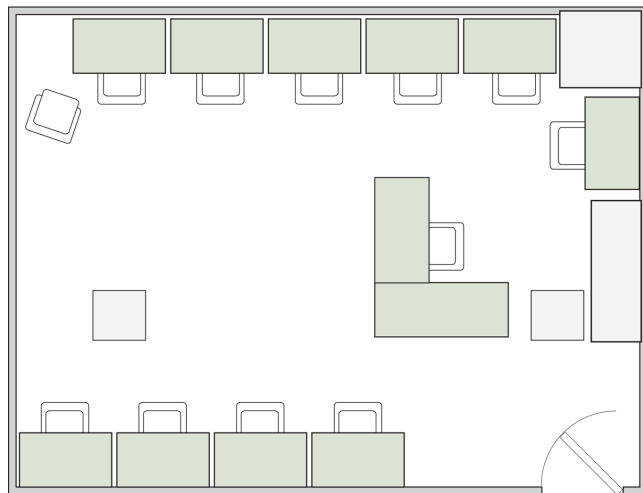- Hands-on experience implementing methods

- Perform common GUR methods:
  - Competitive Review
  - Heuristic Review
  - Usability
  - GUR Playtesting
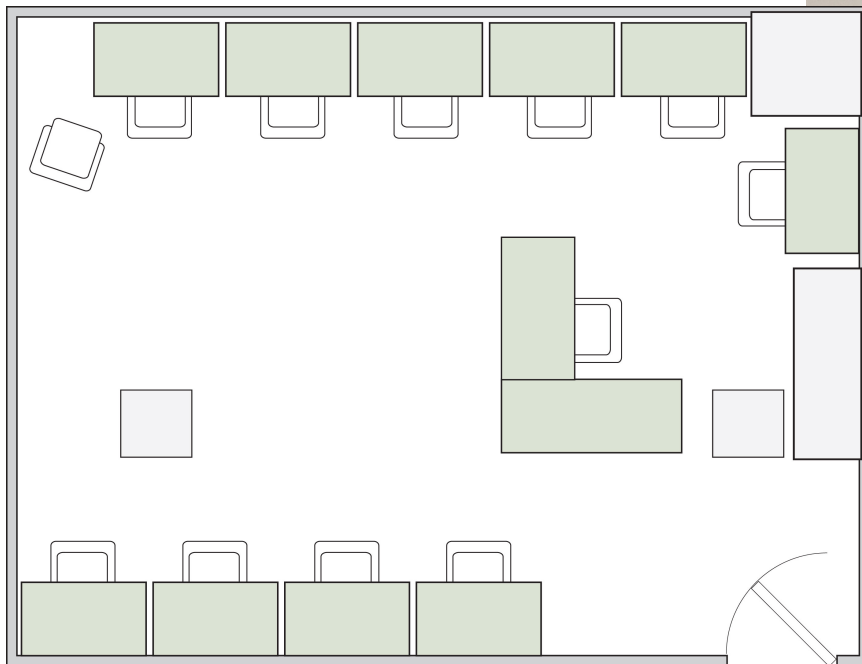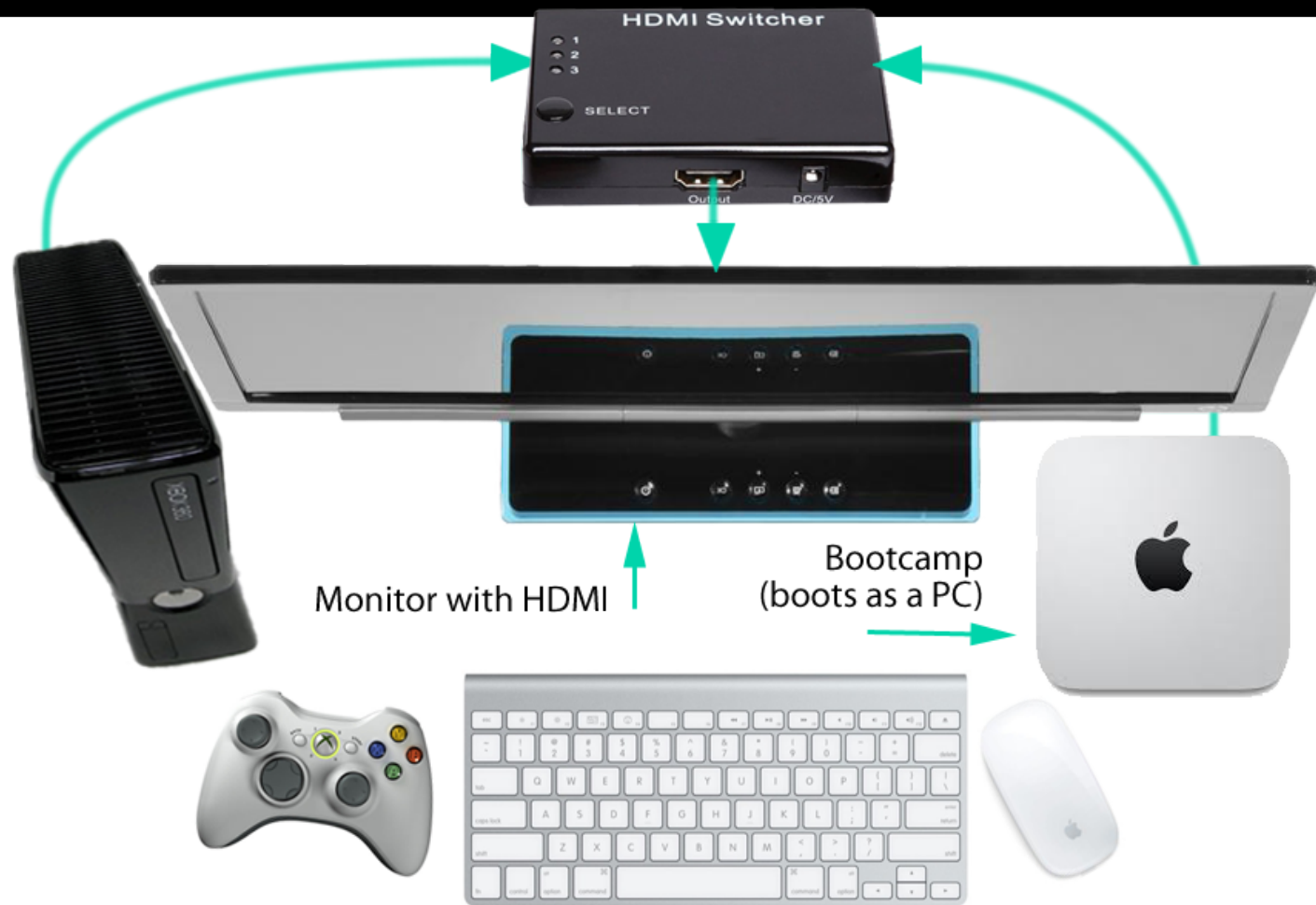- Present findings effectively

Overview

- The basics
- Equipment & Labs
- Game selection
- Topics & methods we cover
- Post mortem

Our labs – downtown Chicago

Playtesting - 7th floor

HDMI Switcher

1
2
3

SELECT

Output   DC/5V

Monitor with HDMI

Bootcamp
(boots as a PC)

http://download.techsmith.com/morae/docs/onlinehelp/3.1/Morae-ManagerHelp.pdf
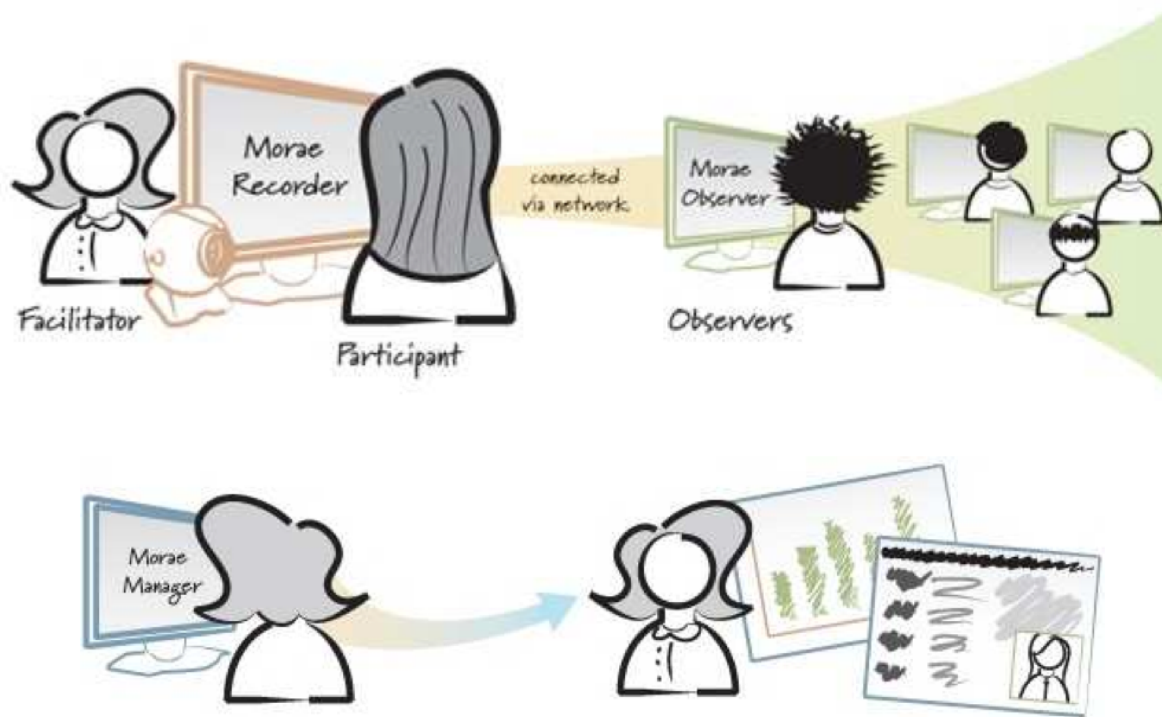
Playtesting station (Multiple needed)	Approx. cost
Monitor (24")	$175.00
Mac Mini w/ Morae Recorder (boots as a PC)	$800.00
Gaming system (Xbox)	$500.00
Keyboard, Mouse, HDMI switch	$150.00
Cables, power strip, misc (extra batteries)	$30.00
Headphones (not shown)	$30.00
Total	$1685.00

Usability

Usability station with Morae Recorder
IP Address

Computer with Morae Observer

game capture HD

HDMI Switcher
1
2
3
SELECT
Output   DC/5V

Monitor with HDMI

Bootcamp
(boots as a PC)

IP Address
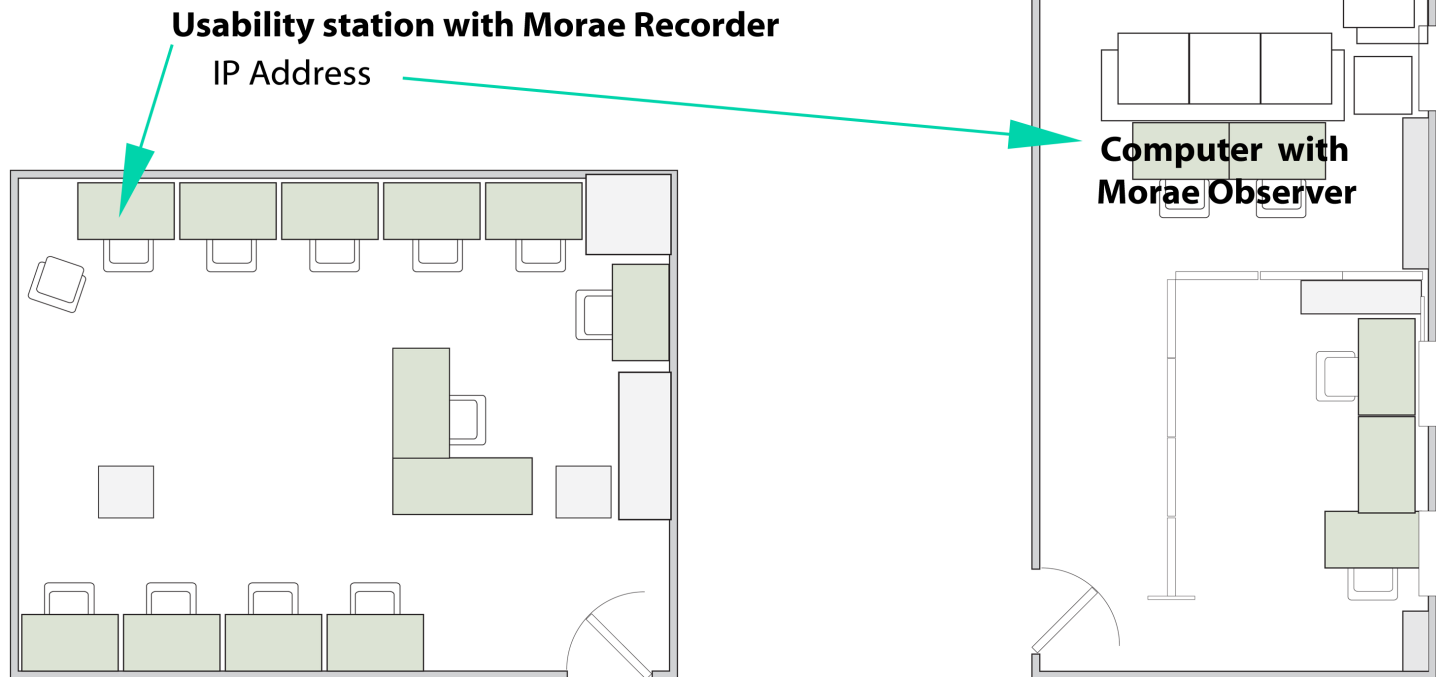
Usability Lab - 8ᵗʰ floor
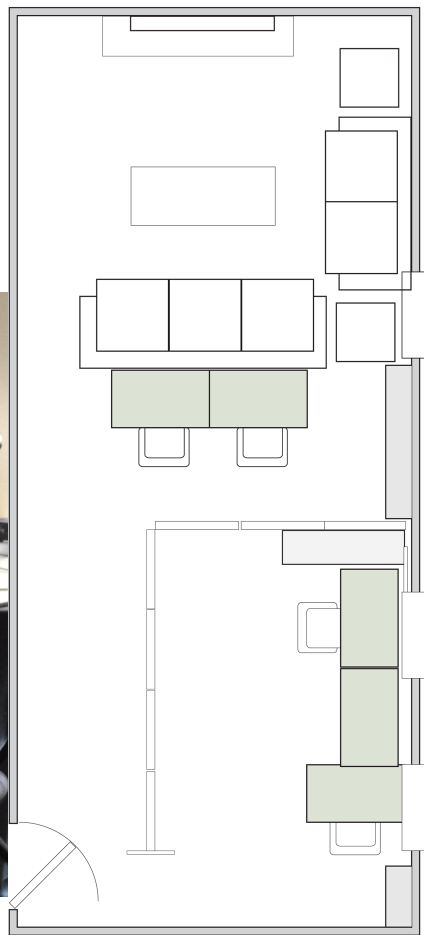
Usability recording station (One needed)	Approx. cost
Monitor (Apple Thunderbolt)	$1000.00
Mac tower with Morae manager and observer (boots as a PC)	$4500.00
Keyboard, Mouse	$100.00
For usability station add game capture +cable	$200.00
Total	$5800.00

- Total = $22,650 with 10 playtest stations

Overview

- The basics
- Equipment & Labs
- Game selection
- Week by week
- Post mortem

Games?

- Commercial?
- Indie?
- Student projects?

Tips for Selecting Games

- Availability: Many copies (10 in our case)
- Price: Inexpensive (Under $10 each, used)
- Stable build
  - Low ratings (lots of problems to find)
  - Short tutorial/intro cut-scenes
  - Does not require specialized knowledge

Worked really well
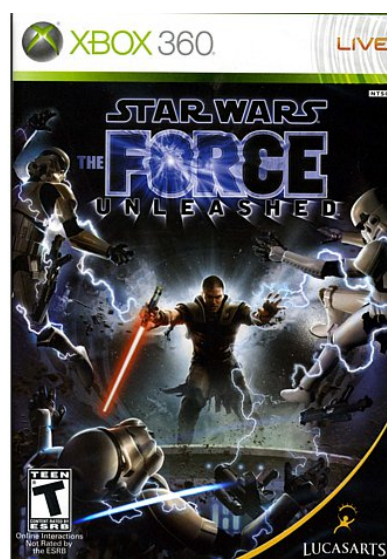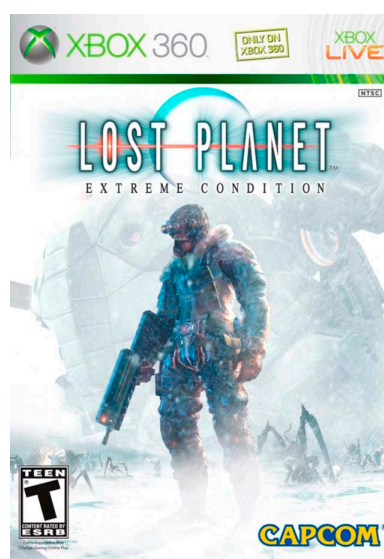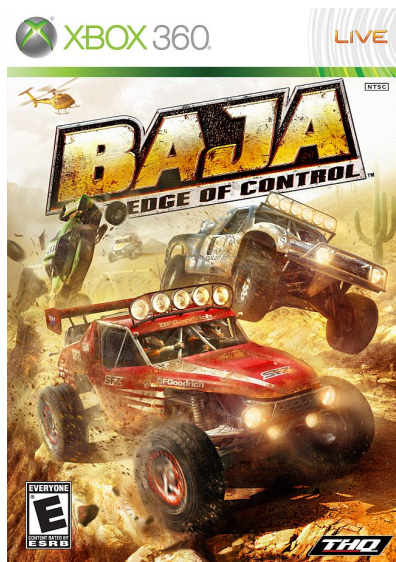
Okay …but too good of game
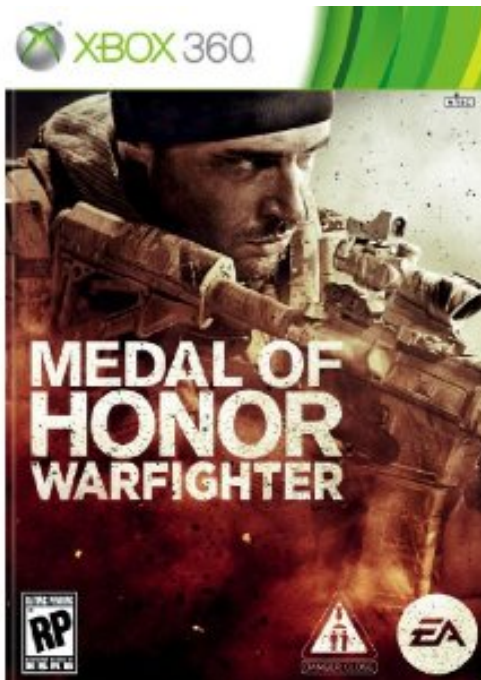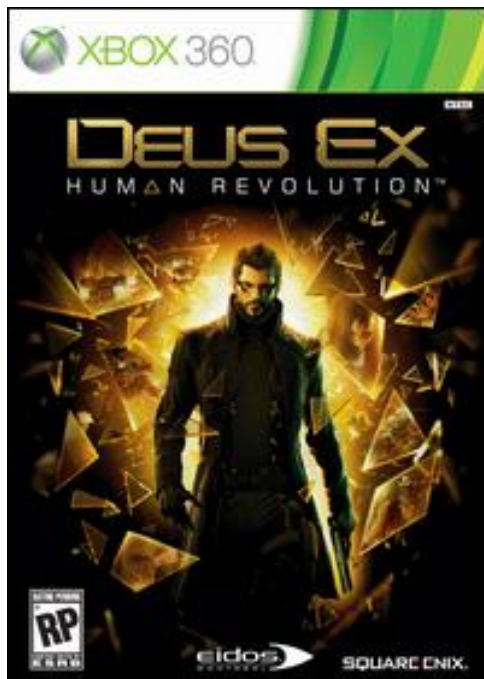
Too much special knowledge
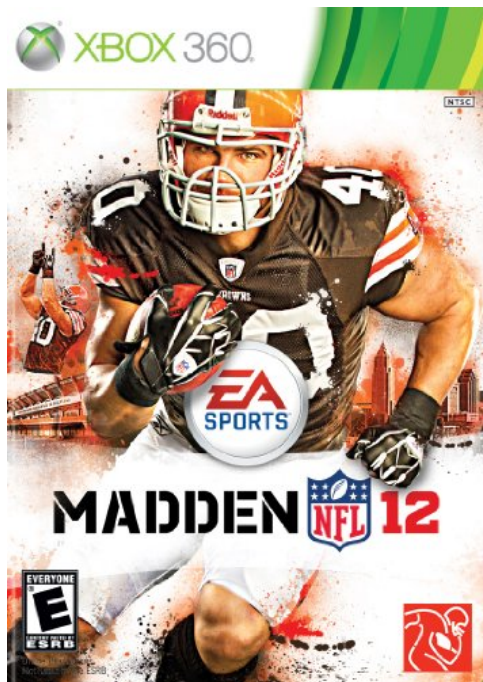
Overview

- Equipment & Labs
- Game selection
- Topics & methods we cover
- Post mortem

Topics & methods we cover

- Course has three parts
  - Part 1: Introduction, early methods
  - Part 2: Usability
  - Part 3: GUR Playtesting

Part One (three weeks)

- You are not your user
- Competitive Review
- Heuristic evaluation

You Are Not Your User

- Keirsey Temperament test
- Bateman's DGD1
  - Conqueror (TJ) – all IS**TJ**, IN**TJ**, ES**TJ** & EN**TJ**
  - Manager (TP) – IS**TP**, IN**TP**, EN**TP** & ES**TP**
  - Wanderer (FP) – IN**FP**, EN**FP**, IS**FP** & ES**FP**
  - Participant (FJ) - ES**FJ**, IS**FJ**, EN**FJ** & IN**FJ**

Competitive Review

1. Identify and profile the competition
2. Define a set of key dimensions for comparison
3. Compare competitors to each other
4. Use the comparisons to create recommendations for action

● Student example (summary table)
Rating*: 1 (very poor) to 5 (excellent)

Game	Racing	Game Modes	Graphics	Physics	Environment	Multiplayer
Baja: Edge of Control	3	3	4	4	4	3
DiRT	3	3	5	5	4	3
Burnout: Paradise	4	4	5	5	4	4
Hot Wheels: Beat That!	4	3	2	3	3	3

Heuristic Evaluation

- Expert reviews (assess problems based on known lists)
    - Ideal = five evaluators and then compare lists
- Heuristics for games need to focus on different attribute than those for productivity tools…

Heuristics for games

- For example: pace, game mechanics, heads up display, memory load for users, and gameplay, etc.

- We discuss several:
  - Federoff: Interface, Mechanics and Play
  - HEP (Heuristic Evaluation for Playability): Play, Mobility and Usability
  - Schaffer: General, GUI, Play

• Student example
(presentation format from Isbister and Schafer)

Heuristic	Provide clear goals, present overriding goal early as well as short-term goals throughout play.
Problem	The game does not provide clear goals.
Rating	Important
Description	The game describes what are the possible goals. However, to find what the current goal players must search for it on a cluttered screen.
Solution	Clearly show what goal is before a race begins.

Topics & methods we cover

- Three parts
  - Part 1: Introduction, early methods
  - Part 2: Usability
  - Part 3: GUR Playtesting

Part Two: Usability (three weeks)

- In the context of games = about player behavior and understanding
  - **Can** the player equip their weapon
  - Does the player **understand** how to complete the level

- Assessment (summative) – (task driven)
  - Think aloud protocol

Usability Plan & Moderator Guide

● Scaffolding the writing & planning

● Adapted from Rubin & Chisnell

Copyrighted Material

Jeffrey Rubin and Dana Chisnell

Foreword by Jared Spool

Handbook of Usability Testing

How to Plan, Design, and Conduct Effective Tests

SECOND EDITION

Copyrighted Material
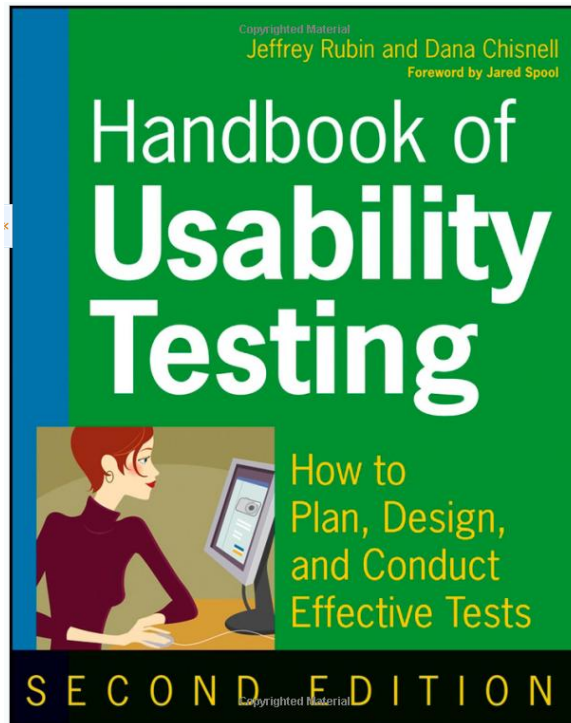
You need to delete or edit anything that is in red text
[Game Title]

Appendix A: Usability test plan and Moderator guide

Authors:	List your names		
Published:	Date of the report	Genre:	Game genre
Study type:	Usability	Platform:	X-Box 360

1.0 Usability test plan

In the following sections, we describe the purpose of our usability test (section 1.1), our research questions (section 1.2), the measures we will collect (section 1.3), recruitment parameters (section 1.4) and outline our procedure (section 1.4).

1.1: Purpose for the test

– summarize in a paragraph or two what is the purpose of your test.

For example from the Poker team:
In this usability study, we will assess the usability of the interface for users. Specifically, we will explore if users can (1) create a new career, (2) complete the introductory level, (3) select a tournament, (4) and complete the selected tournament.

1.2: Research questions

– list your specific research questions.

Example from Poker team:
(1) Can users create a new career?
(2) Can users raise, call, fold, and go all in?
(3) Can users check their cards?

1.3 Measures

These are what you are going to pay attention to – summarize briefly here.

Usability Report

- Adapted from GUR at Microsoft
- Again…a template
  - Scaffold the writing so they can focus on *conducting* the studies

Usablity report

Authors:	Your names		
Published:	Date	Genre:	Do this
Study type:	Usability	Platform:	X-Box 360

Report Summary

Summarize what part of the game you were looking at. Include your research questions here.

List how many participants you had, their ages and gender – and briefly describe them (their experience level ...etc.)

Highlights

- **Finding 1:**

  Summarize in one line: These are things that went well – e.g. all participants were able to find and equip weapons

- **Finding 2:**

  Summarize in one line: These are things that went well – e.g. all participants were able to find and equip weapons

Lowlights

- **Issue 1:**

  Summarize in one line: These are things that did not go well – e.g. two participants did not understand how to perform a jump in Skate

- **Issue 2:**

  Summarize in one line: These are things that did not go well – e.g. two participants did not understand how to perform a jump in Skate

Top Action Items

- **Recommendation 1:**

  These are top things you recommend that the game makers fix- these come directly from the action items below.

- **Recommendation 2:**

  These are top things you recommend that the game makers fix- these come directly from the action items below.

Highlights

Finding 1: Title

Provide more detail, e.g. After practice with the prototypes, all 5 participants were able to scroll from one end of the car list to the other. Moreover, all participants were able to move in between a few cars at a time in the list when asked to do so.

Include screen caps if needed – include graphs as needed

"Inclue a relevant quotes from a participants" – Participant 4

Action Items:

None, this is good. *(Sometimes, even a highlight will need an action)*

Finding 2: Title

Here is an example from the Poker team:

After loading up the game for the first time, participants were prompted to start the career mode. All of them were able to navigate the first menu and begin the career without any problems

Include screen caps if needed – include graphs as needed

"Inclue a relevant quotes from a participants" – Participant 4

Action Items:

None, this is good. *(Sometimes, even a highlight will need an action)*

Add more findings as needed

Topics & methods we cover

- Three parts
  - Part 1: Introduction, early methods
  - Part 2: Usability
  - Part 3: GUR Playtesting

Part 3: GUR Playtests

- Participants' **attitudes** and **opinions**
- Our method
  - Players play for a period of time or to a specific goal (about 20 minutes)
  - Stop – take a questionnaire (flip HDMI switch)
  - Repeat 3x for an hour of playtime

Research Q v. Playtest Q

- RQ - What the researcher wants to know
  - What did users think of the graphics?

What the Participant Sees

- Playtest Q closed
  - How satisfied were you with the artistic style of the graphics?
    - (1) Very dissatisfied– (3)Neither satisfied or dissatisfied – (5) Very satisfied
- Playtest Q open
  - What did you LIKE MOST about the graphics?
  - What did you LIKE LEAST about the graphics?

Participant Samples

- Usability = 5-7 v. GUR Playtest = 30

Topics & methods we cover

- Three parts
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  - Part 2: Usability
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If only…

- Ideal = 15 weeks (semester)
  - Have them evaluate a peer's capstone project
- Recruitment is difficult
  - Set-up with instructors before term
  - We will be setting up a participant pool for 2014-2015 for all classes that involve participants

…more

- Class cap (20) …ideal around 15 (group size = 3)
    - First time (winter 2013) = 13
    - This time (winter 2014) = 32
    - *We are now running two sections a year*
- Students really need a lot of scaffolding in the writing
    - Added the templates this year

Takeaways

- What you need to set up a course like this at your institution
  - Lab/Equipment
  - Topics & methods we cover
    - Highlight how to scaffold the students so they are conducting studies on their own

Questions?

- http://facsrv.cs.depaul.edu/~cputnam/protected/classes/GAM312_winter14/schedule.php
- user name = student
- password = 1h4veAccess
  - cputnam@cdm.depaul.edu
  - http://www.cyputnam.com/