Game playtesting, Gameplay metrics

(Based on slides by Michael Mateas, and Chapter 9 (Playtesting) of Game Design Workshop, Tracy Fullerton)
Upcoming deadlines

- **Friday (Feb. 7):** team assessment report
  - Due by midnight
  - Report on team activities this week

- **Monday, February 3 (today)**
  - Sprint 1 report due
  - Sprint 2 plan due

- **Friday, February 14: End of Sprint 2**
  - 12 full days left in Sprint 2 (including today)

- **Saturday, February 22**
  - 10am-1pm, Game Presentations and Critiques
Upcoming events

- Winter Job & Internship Fair
  - Tuesday, February 4
  - 10:30-3pm, College 8 West Field House
  - See [http://careers.ucsc.edu/events/winter2014.html](http://careers.ucsc.edu/events/winter2014.html) for more information
Why you must playtest
Playtesting

- Playtesting is the only way to determine if your game is
  - Internally complete
  - Balanced
  - Fun to play

- Playtesting should be performed early in the process
  - With physical prototypes
  - With computational prototypes
  - With the actual game, in all stages of development

- At early stages of design, it is ok to test with yourself and with confidents (friends), but as design progress, you must test with outsiders (people you don’t know)

Tracy Fullerton, Game Design Workshop, Figure 9.1
Recruiting playtesters

- Ask friends of friends
- Prepare an email to send to the undergrad game list
- Find people in your target audience
  - People who spend money on games like yours
- If you have enough people interested, you can actually screen applicants
  - Short survey about kinds of games they play
  - Hobbies
  - Quick conversation to see how articulate they seem (if they can’t communicate with you, they won’t be much use)
- Diversity is good – sample the entire range of your target market
- For many playtest situations, you can re-use playtesters, so establish a good relationship
  - Easy trick: provide snacks at playtest sessions
Recruiting playtesters: Playtest Fest

- Collaborative event across all teams
  - Held Spring quarter, afternoon of one day
  - All games available, attract many students from across campus
  - Done first time in 2012, great success
Playtesting session

- Change your mindset – you are no longer the proud designer, you’re an investigator who’s job is to learn what needs to be fixed with the game

- Playtesting with individuals is best, but you can do it with groups

- *Don’t over-explain your game* – let them learn by playing
  - Your game should stand on it’s own
  - Let players make mistakes – you’ll learn more if you speak less

- A playtesting script can help you to stay a researcher, rather than a sensitive designer
Playtesting script

- Welcome the playtesters
  - Explain playtesting process, goal is to help improve your game
  - Remind the playtesters that you are testing the game, not their skill.
  - Any difficulties in playing the game will help you to improve the game

- Warm-up discussion
  - Some questions to find out about the games they play.
  - What do they like most about these games?
  - What was the last game they purchased?
Playtest script (cont’d)

- **Conduct playtesting session**
  - Provide as little feedback to players as possible. Give them time to try things, figure things out.
  - **Ask them to talk outloud.** Gives you insight on what they are thinking, **why** they are making choices.

- When they are finished playing, interview them

- Thank them
Methods of playtesting

- **One-on-One Testing** – You sit down with each tester and look over their shoulder

- **Group Testing** – Have a group play your game and you ask them questions

- **Feedback Forms** – Give each tester a standard list of questions

- **Interviews** – You sit down with each tester and give them an in-depth oral interview

- **Open Discussion** – You conduct a discussion group after testers have played the game. You take notes
The play matrix can be a useful discussion tool during the post-experience interview.
Using the play matrix

- You can ask players 3 questions to get discussion started
  - Is the outcome of the game determined more by chance or skill?
  - Is the outcome determined more by mental skill or physical dexterity?
  - If you could move the game more towards one quadrant or the other, which would you prefer?

- Players may be able to verbalize dissatisfaction with your game more effectively by placing games they do enjoy in other quadrants
Note taking

- Fullerton’s chapter has a good generic form for note taking
  - Separates note taking into:
    - In-game notes
      - Observations made while player is playing the game.
      - Answers to questions you ask player while they are playing the game
    - Post-game notes
      - Answers to questions you ask of players once they have finished playing the game
In-game note taking

- Some questions to ask while players are playing the game:
  - Why did you make that choice?
  - Does that rule seem confusing?
  - What did you think that would do?
  - What is confusing you?
  - What is frustrating you

- Things to observe while players are playing:
  - Areas that are unintentionally difficult, frustrating, confusing (or, too easy)
  - Times when users needed help to continue (and why)
  - Times when players behaved in a way that is very different from expectations
  - Parts of the game users really like.
  - Emotional outbursts of any kind (good or bad)
  - Difficulty with controls
  - Software bugs (but, this should not be primary focus – are really interested in gameplay feedback)
Post-game note taking

- After the gameplay session, want to talk with players about the experience
  - Can be free-form, following a rough set of questions (open discussion)
  - Or, can be more focused, using feedback forms or a set questionnaire

- Questions of interest:
  - Overall thoughts on the game
  - Overall thoughts on gameplay
  - Were you able to learn how to play the game quickly, easily?
  - What is the objective of the game
  - How would you describe the game to a friend who had never played the game before?
  - What did you dislike about the game?
  - Was anything in the game confusing or frustrating?
  - What information would you have liked to have at the beginning of the game that you didn’t have?
Test control situations

- You’ll want to include support for creating specific situations for testing that are hard to achieve playing the game from the beginning
  - End of game
  - A random event that rarely takes place
  - A special situation within a game
  - A particular level of a game
  - Playing under resource constraints or with huge resources
  - New features you’ve just added

- This is one of the reasons cheat codes exist in game – they are put in during development for controlled testing, and left in afterwards
Gameplay metrics

- In addition to human-collected metrics, it is possible to instrument a game to automatically collect gameplay data
  - Exact data will depend on the specific game, and area of focus

Jungle level, Halo 3:
Colored dots show location at 5 second intervals. Each color represents a different range of time from level start. Dots are clustered by color, indicating players are making good progress through the level.

Halo 3: How Microsoft Invented a New Science of Play
www.wired.com/gaming/virtualworlds/magazine/15-09/ff_halo
Example gameplay metrics

- When and where the player avatar dies
  - Permits computing number of deaths per player, per level
  - Can overlay death locations on a map of the level, to create heat maps

- How long it takes a player to complete a level
  - Gives a good idea of which levels are longer, shorter

Heat map of deaths in Replica Island.

www.gamasutra.com/view/feature/6155/hot_failure_tuning_gameplay_with_.php
Other gameplay metrics

- Recording certain player actions (when or where)
  - Jumping, firing a gun, picking up certain items, completing a puzzle
- Recording movement of player
  - Where the player is every N seconds
- Menu choices
- How often a player accesses a help system
- Total duration of play
  - Does a player stop playing before they complete a level?
  - How long is a typical gameplay session?
- When does a player level up?

- Each specific game will have metrics that are of particular interest for that game.