CS-4154: Analytics-Driven Game Design

Game Polish
Logistics

• Newgrounds Release is next Tuesday, November 17
  • We’ve released comments on CMS; you should address some of these comments as part of this milestone
  • You should have an A/B test
    • Make sure to get the newest version of the Logging package
    • Let me know if you have any issues with the package... sooner is better!
• You can host binary assets on the GDIAC web server
  • Music, etc.
Intro: What is game polish?
(and why it’s important)
What is game polish?

• Hard to define objectively

• "Polish is often adding things nobody will ever notice, comment on, or appreciate, but will notice, comment on and appreciate when they aren't there." - Frank Kowalkowski, Alpha Protocol
What is game polish?

- "Polish, to me, is the last 10 to 20 percent of effort where everything in the game is now working and you take the time to focus on the little details that have a big impact on the overall quality of the game. [...] Polish is extremely important, as it has the ability to take a good game and make it great." - Rod Fergusson, Gears of War 2
What is game polish?

• Small details that:
  • Were added intentionally
  • Have minimal impact on the core mechanics
  • Enhance the gameplay experience

• Can refer to story, animations, sound effects, visual effects
Why is it important?

• Makes games seem more fun than they actually are
Example: Breakout

"A juicy game feels alive and responds to everything you do tons of cascading action and response for minimal user input."

From: “Juice it or Lose it – a talk by Martin Jonasson & Petri Purho” (~16 min)
https://www.youtube.com/watch?v=FyoaCDmgnxg
Why is Polish important?

• Makes games seem more fun than they actually are
• Adds cohesiveness to the theme of your game
Canabalt

http://www.adamatomic.com/canabalt/
Why is Polish important?

• Makes games seem more fun than they actually are
• Adds cohesiveness to the theme of your game
• Presentation can make a big difference
Crush the Castle vs. Angry Birds

(guess which one is being made into a movie)
Crush the Castle vs. Angry Birds
Why is Polish important?

• Makes games seem more fun than they actually are
• Adds cohesiveness to the theme of your game
• Presentation can make a big difference
• Enhances visual feedback
That’s How We Roll (one of last year’s games)

Polishing techniques

With inspiration from Disney
The Twelve Basic Principles of Animation

- A list of animation principles developed by Disney’s Ollie Johnston & Frank Thomas
  - Squash and Stretch
  - Anticipation
  - Staging
  - Straight Ahead Action and Pose-to-Pose
  - Follow Through and Overlapping Action
  - Slow In and Slow Out
  - Arc
  - Secondary Action
  - Timing
  - Exaggeration
  - Solid Drawing
  - Appeal

*Ultimate Chicken Horse – Clever Endeavour Games*
The Twelve Basic Principles of Animation

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  • Straight Ahead Action and Pose-to-Pose
  • Follow Through and Overlapping Action
  • **Slow In and Slow Out**
  • Arc
  • Secondary Action
  • **Timing**
  • Exaggeration
  • Solid Drawing
  • Appeal
Easing

- Combination of **Slow In/Slow Out** and **Timing**
- Idea: Replace linear interpolation with more interesting movement patterns
- Makes movement feel more natural/stylized
- [http://sol.gfxile.net/interpolation/](http://sol.gfxile.net/interpolation/)

From easings.net
Easing in Thermo
Easing in a Super Mario title screen
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  - Solid Drawing
  - Appeal
Exaggeration

• Bring out characteristics about your character or your world by exaggerating them
Thermo (XXL Edition)
Exaggeration

• Bring out characteristics about your character or your world by exaggerating them
• Back to the “juiciness” part – having lots of explosions is pretty exciting
  • Especially when triggered over time
  • Called “cascading action” in the Juice It talk
Cascading Action in *Metal Slug*

https://youtu.be/lMx4iLp-EAc?t=9m46s
Jetpack Joyride
Exercise – Identifying polish in a game

• With your group, choose one of the listed games and try to:
  • Identify three things that you would consider “polish” i.e. intentionally placed in the game to make it “feel” better, but minimal impact on core gameplay
    • Imagine what a prototype of the game looked like
  • Think of anything you would add to the game
    • From a programmer’s perspective
    • And a designer’s perspective
Conclusion

• Polishing your game helps it stand out from the rest!
  • Esp. if your game mechanics are fairly simple

• Think of it not just as a game, but as an experience
  • Be in control of both visual and aural details
Video Resources

• “Game Feel: Why Your Death Animation Sucks” (GDC 2015)
  • https://www.youtube.com/watch?v=pmSAG51BybY
• “Juice it or Lose”
  • https://www.youtube.com/watch?v=FyoaCDmgnxg
• “The Art of Screenshake”
  • https://www.youtube.com/watch?v=AJdEqssNZ-U
• Will post these and other resources on Piazza