IMGD 1001 - The Game Development Process: A Theory Of Fun

by

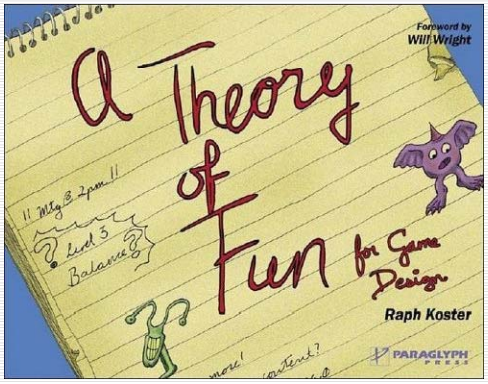
Robert W. Lindeman (gogo@wpi.edu)

Kent Quirk (kent_quirk@cognitoy.com)

(major credits to Raph Koster)

A Theory of Fun

- Excellent book by Raph Koster
  - Designer of *Star Wars Galaxies*, and one of the better speakers at Game Developer's Conference
- Good blog, too: www.raphkoster.com



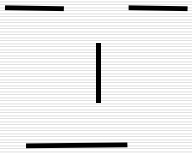
People are pattern-matching machines

- See the face?
- Once you see it, you can't help seeing it after that

People are pattern-matching machines

- We see faces even in the most boring images
- We might even see expressions

;-)



Noise == boredom

- We try to find a pattern for a little while, then give up.
- Remember Shannon's information theory?
- Randomness == incompressible

The Converse:

- Information == compressible
- "Chunking"
- Wrapping things at higher levels so as to improve perception and recognition
- Ex: Chess

Chunking: "Muscle Memory"

- Your muscles don't have memory
- But your brain does (duh)
- You train your nervous system to react in ways that no longer require your forebrain to interact
  - Swing of a baseball bat
  - Driving a car
  - Playing...video games!

Pattern matching is interesting

- We like to find and identify patterns
- Bejeweled
  - Takes it even further -- gives us the ability to impose patterns

Pattern matching is fun

- Casual games
  - Find the key to the game
  - Learn the skills
    - And all the powerups for different levels
  - Let's look at one
    - addictinggames.com
      - Bloons

Pattern matching is fun

- It goes to all levels
- RTS:
  - Fun to learn to use the pieces
  - Fun to learn to find a strategy to beat each opponent / level
  - Fun to learn the metastrategy about how the pieces are organized
  - Fun to figure out where your friends have strengths and weaknesses
- Fun to find the next game to play

Games are puzzles

- "They are about cognition and learning to analyze. When you're playing a game, you'll only play it until you master the pattern. Once you master it, the game becomes boring."
  - -- Raph Koster

Players seek to optimize

- If people see an optimal path, they'll take it.
- Sometimes at the expense of gameplay
- We have names for that:
  - Cheat, hack, exploit, macro...

It's what humans do

- "Clubbing baby seals"
- You can fight it
  - Tighten up the rules
  - Make exploits harder
  - People (sometimes) hate it when they're arbitrary
- Make the game systems better
  - Take away the advantage
  - Clubbing beginners won't happen if there's no advantage to it

Where is the boundary?

- The letter of the rule?
- Or the intent?
  - Ask
- Sometimes new games are invented by breaking or changing the rules!
  - Rugby -> Football
  - Most of poker

Game design: a losing battle

- Humans act to make their games boring
- It's in our very genes
- It's actually what makes them fun in the first place!

It's why we have human competition

- People provide much more subtle opportunities for puzzles

Game design

- The problem of providing a great possibility space for our players to explore
- But if the designer tries to conceive of the whole thing in advance...
- ...players won't be far behind.