Game Design

The most important game design skill

Listening to

- Team
- Audience
- Game
- Client
- Self

The designer creates an experience

- Game is not an experience
- Game creates wonderful compelling memorable experiences

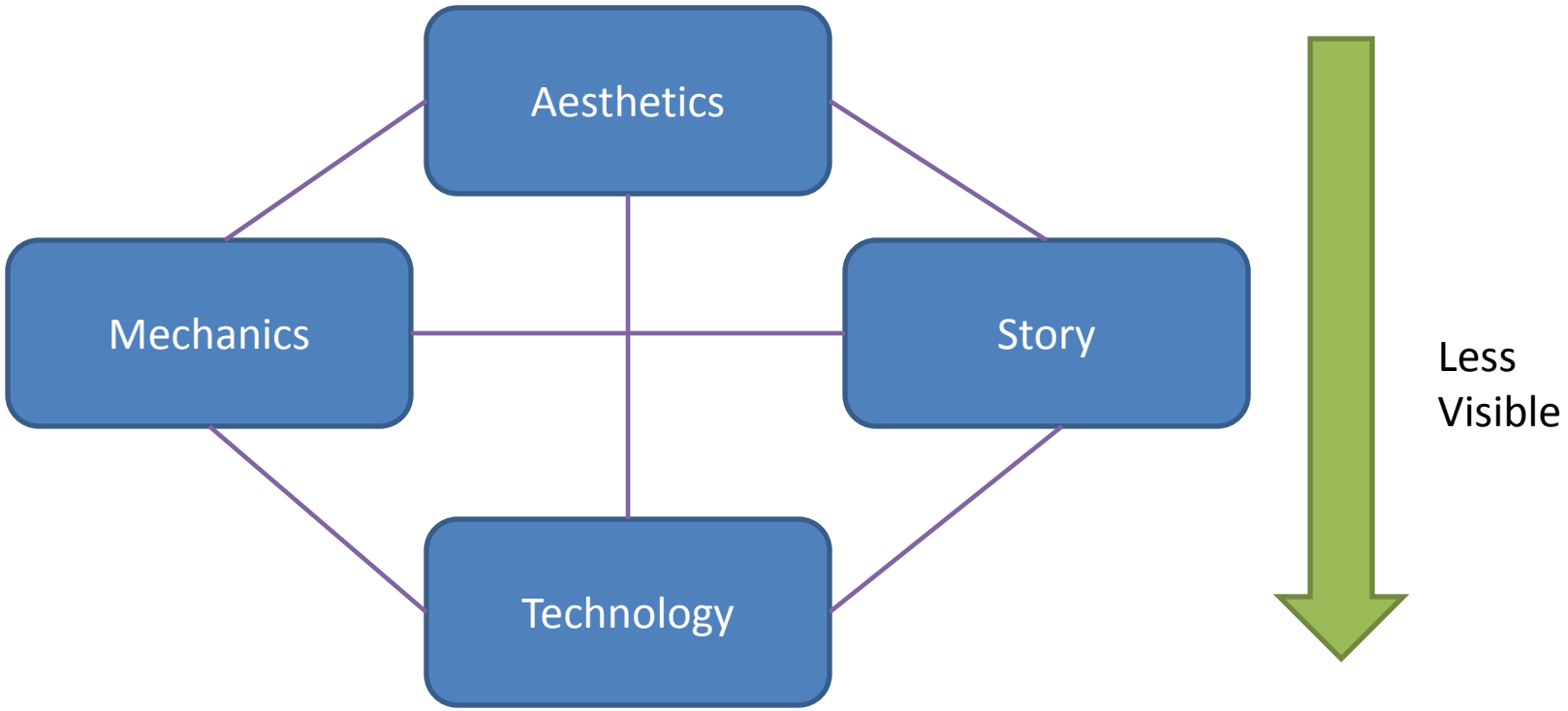
Stop thinking about the game, start thinking about the experience

- What experience do I want the player to have?
- What is essential to that experience?
- How can my game capture that essence?

Fun is pleasure with surprises

- A toy is an object you play with
- A game is a problem-solving activity, approached with playful attitude.

The four basic elements



Elements reinforce a theme

- What is my theme?
- Am I using every means possible to reinforce the theme?

Eight filters

- Does the game feel right?
- Will the audience like it enough?
- Is it well-designed?
- Is it novel enough?
- Will this game sell?
- Can it be built?
- Does it meet social/community goals?
- Do playtesters enjoy the game enough?

The rule of the loop

The more times you test and improve design, the better the game will be

- How can I make every loop count?
- How can I loop as fast as possible?

Risk Mitigation

- What could keep the game from being great?
- How can I stop it from happening?

Tips for prototyping

1. Answer a question
2. Forget quality
3. Don’t get attached
4. Prioritize: biggest risks first
5. Parallelize prototypes
6. Avoid computers
7. Build the toy first

   David Jones: Lemmings, GTA

How much is enough?

Mark Cerny: The Method

Design ends when you produced two **completely** finished levels

The game is made for a player

- Einsten’s violin
- What do they like? Why?
- What do they expect to see?
- If I were them, what would I want to see?
- What would they dislike about my game in general?

Don’t make misogynistic games

More of:

1. Real world
2. Emotion
3. Nurturing
4. Communication & verbal puzzles
5. Learning by example

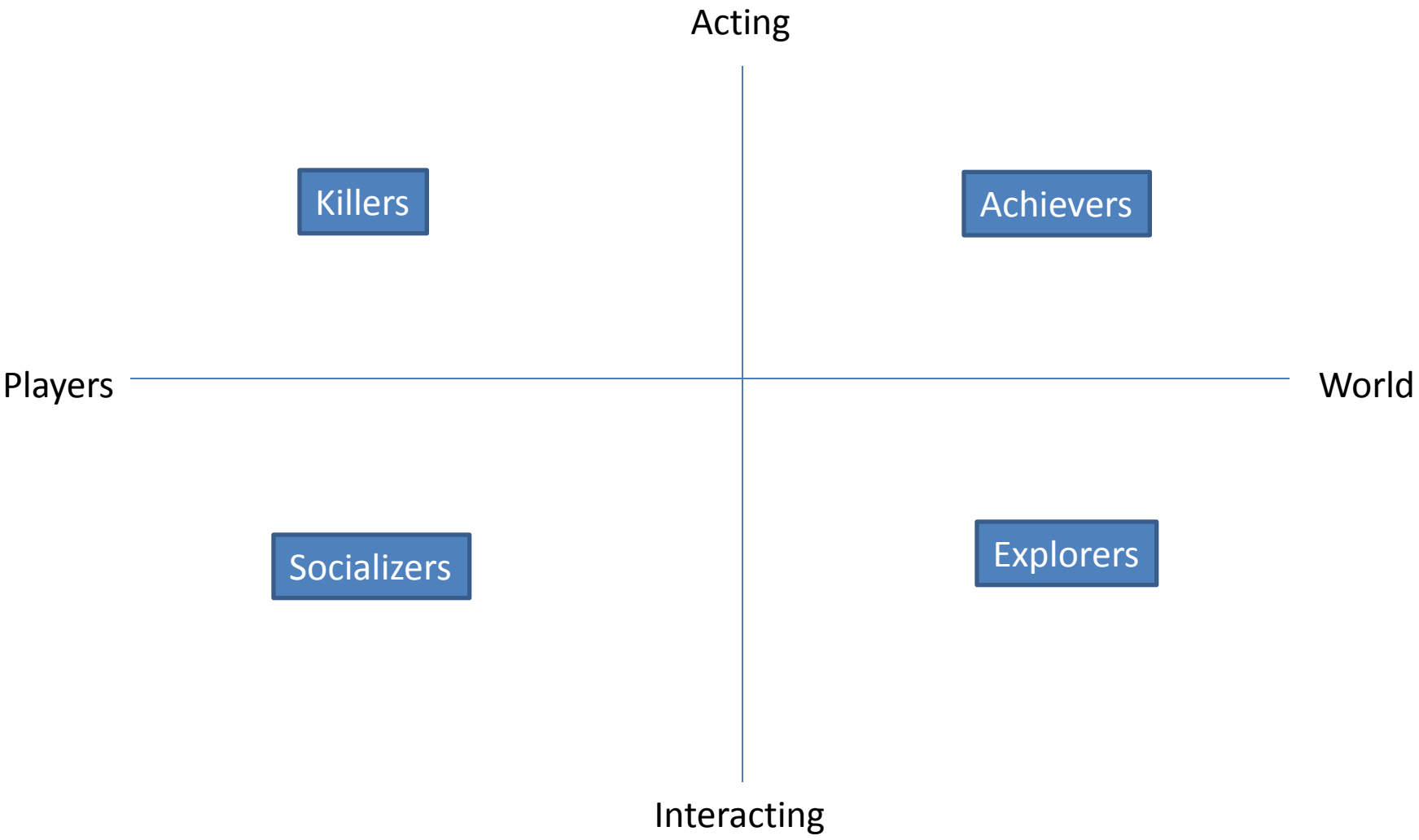
Less of:

1. Mastery
2. Competition
3. Destruction
4. Trial and Error

Psychographics

1. Sensation
2. Fantasy
3. Narrative
4. Challenge
5. Fellowship
6. Discovery
7. Expression
8. Submission

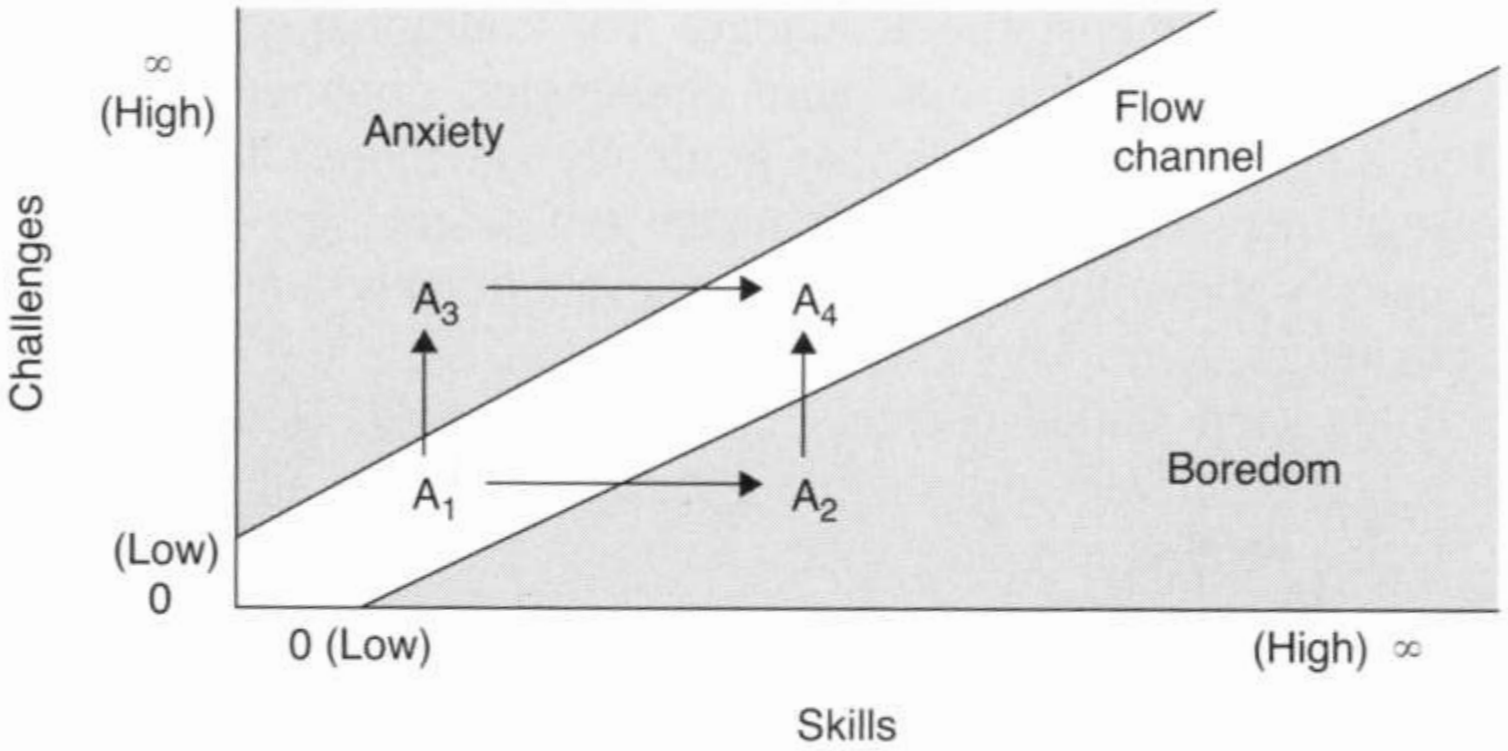
Bartle's Taxonomy

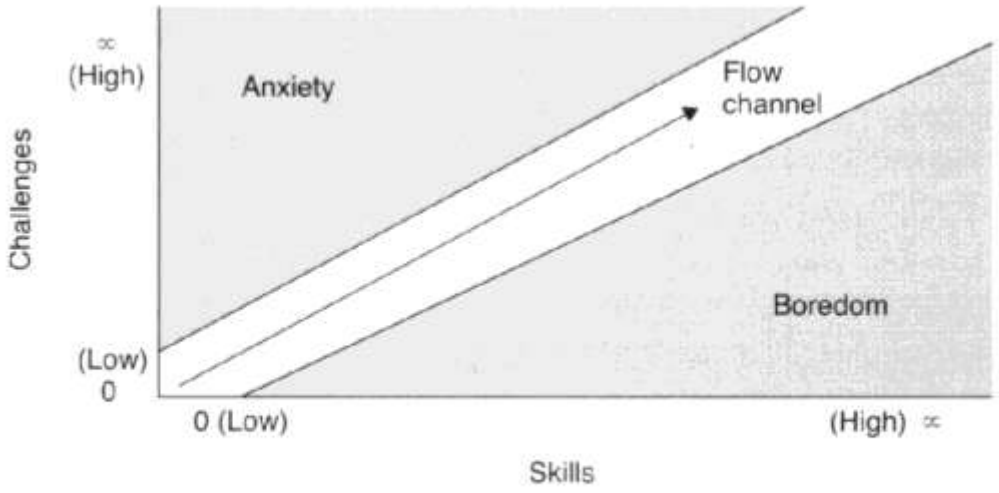


- Anticipation
- Delight at another’s misfortune
- Gift giving
- Humor
- Possibility
- Pride in accomplishment
- Purification
- Surprise
- Thrill
- Triumph over adversity
- Wonder

Focus

- Clear goals
- No distractions
- Direct feedback
- Continuously challenging


∞
(High)
Challenges
Anxiety
Flow
channel
A3
A4
A1
A2
Boredom
(Low)
0
0 (Low)
(High) ∞
Skills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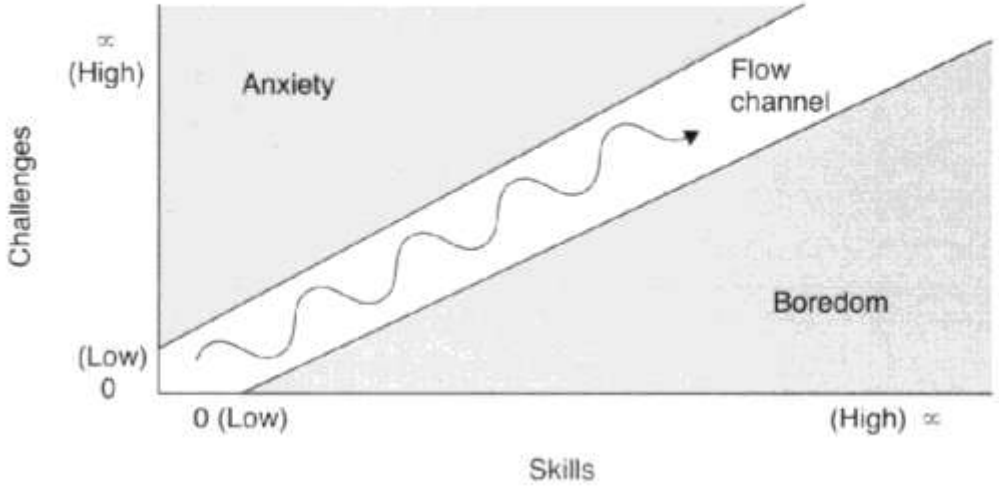
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(High) ∞
Skills

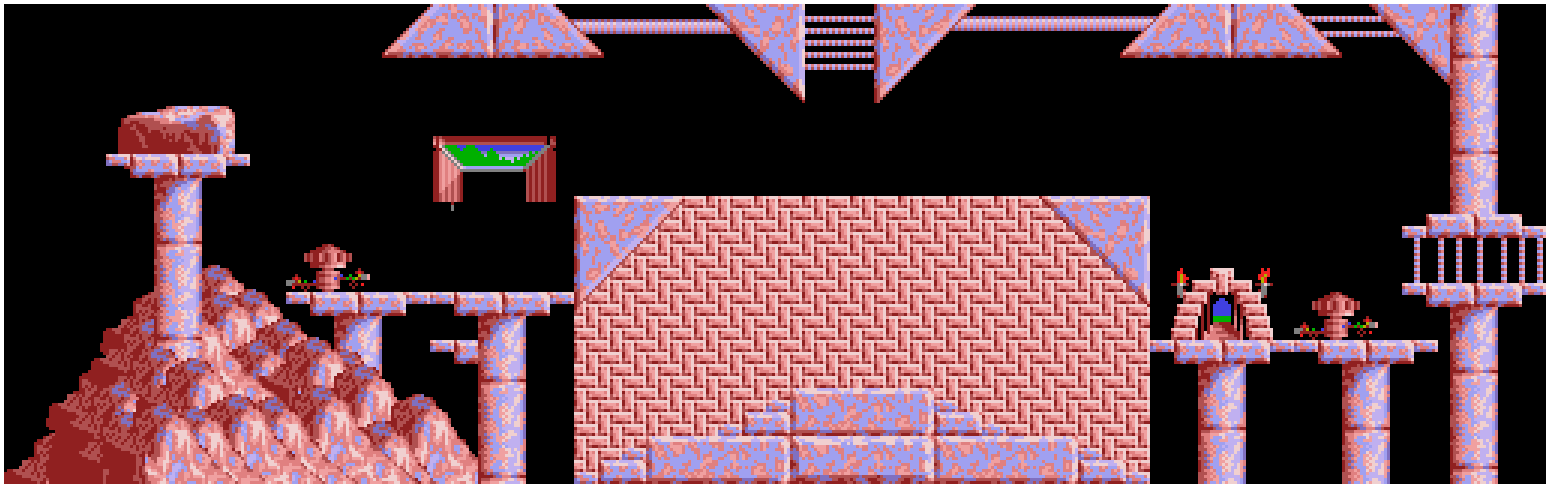

Lemmings
TM


OUT 4
IN 0%
TIME 4-52
50
50
10

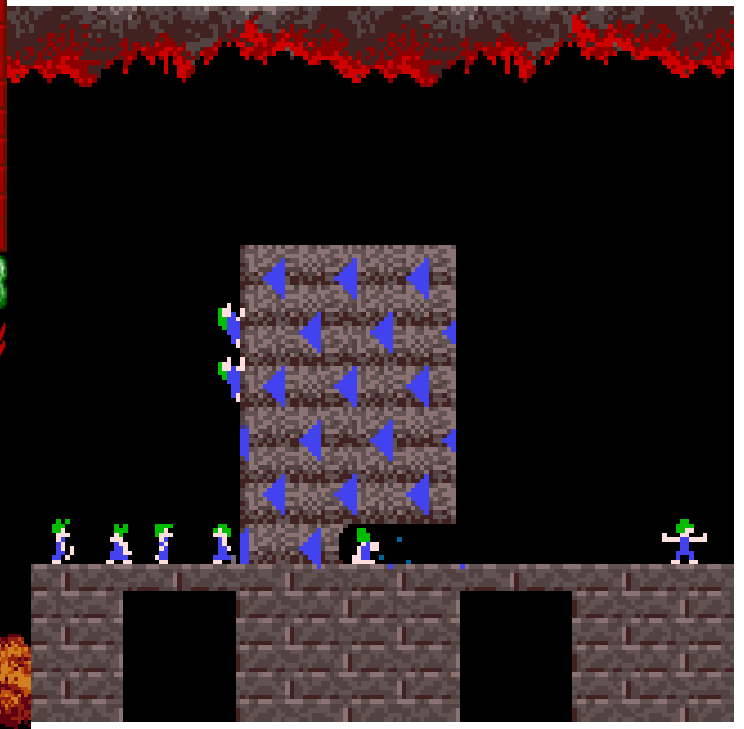

4
50
50
Game paused
Out: 6
Home: 1
Time: 04:42

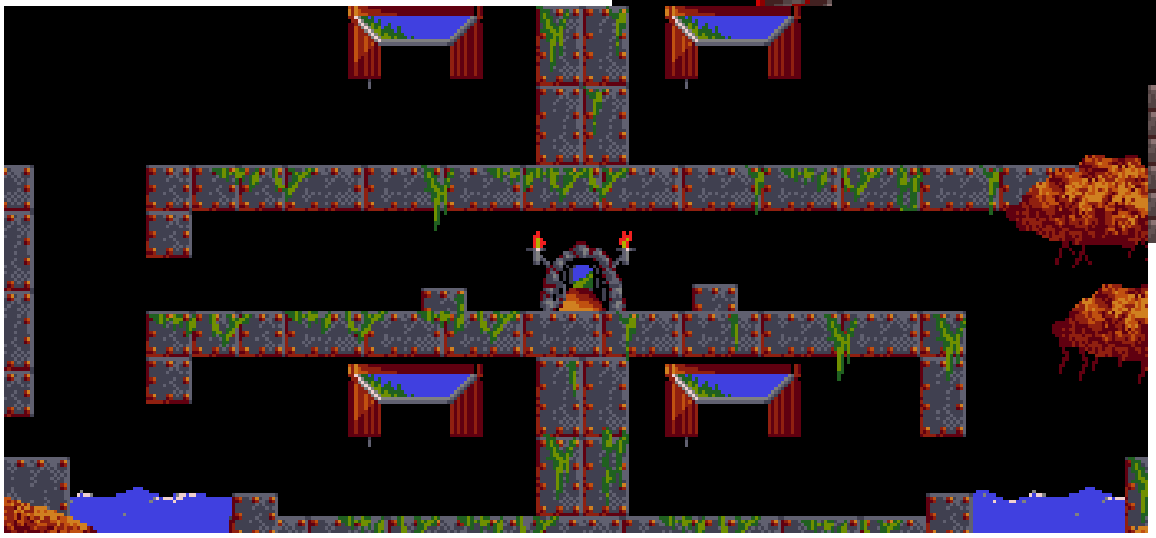

Home
100
0%
2-39
80
80
20
20
19
19
10
19
19
20


OUT 13
IN 10%
TIME 2-11

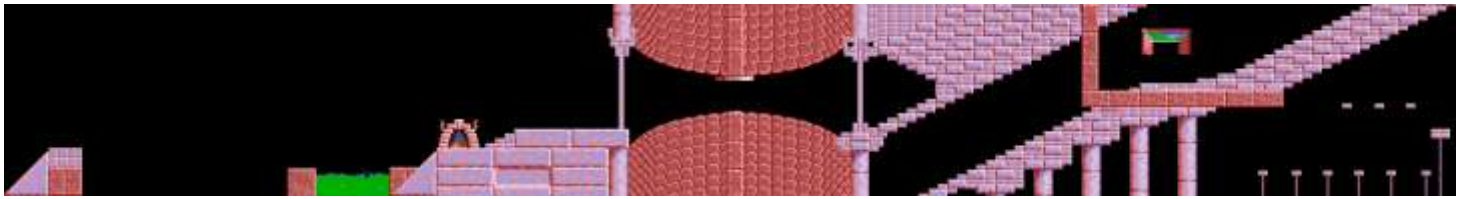


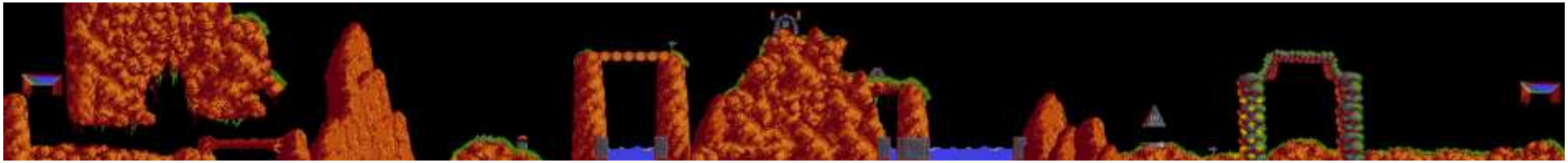

OUT 2
IN 00%
TIME 3-53
01
01
20
20
20
20
20
20
19
20






Level 1 Wait... a doddle?
Number of Lemmings 100
50% To Be Saved
Release Rate 50
Time 4 Minutes
Rating Red Hot
Out: 5 In: 0% Time: 3-48






Lemmings
Trial
Fun
Tricky
Taxing
Mayhem
Back
Navigate
Accept

Day at beginning

Day even bigger

Night

Water

Roof

Bowling

Zombotany

Zen Garden

“Beghouled”

The game mechanics

Mechanic #1: Space

- Is the space discrete or continuous
- How many dimensions
- What are the boundaries
- Are there subspaces, how are they connected
- Are there multiple space representations

Mechanic #2:
objects, attributes, states

- What are objects, their attributes?
- What are possible states for each attribute?
- What triggers the change of state?
- What states are known by players?
- Would changing who knows what state improve the game?

Mechanic #3: Actions

Promote emergent actions:

1. Add more verbs
2. Verbs can act on many objects
3. Goals can be reached in many ways
4. Many subjects
5. Side effects that change constraints

Mechanic #4:
Rules

1. Modes – avoid too many
2. Rules become physical constraints in video games
3. Goal is the most important rule
   - Concrete
   - Achievable
   - Rewarding
   - Balance between short- and long-term
   - Let users decide on their own goal

Mechanic #5: Skill

3 categories: physical, mental, social

- What skills does my game require?
- Are some categories missing?
- Which skill is dominant?
- Are some players much better? Is this unfair?
- Can players improve their skills?
- Can the game be played without initial skill?

Mechanic #6: Chance

Chance = uncertainty = surprise

- What in the game is random?
- Does randomness generate surprise or hopelessness?
- What is the expected value of the outcome?
- Are there opportunities for interesting risk?
- Relationship between skill and chance?

Balance

- All good games have balance
- Impossible to get right without playtest analytics

Balance #1: Fairness

- Symmetrical games
- Asymmetrical games
  - Real-world
  - Personalization
  - Level the playing field
  - Rock, paper, scissors: nothing reigns supreme

Balance #2: Challenge vs Success

- Increase difficulty with each success
- Let players get through easy parts fast
- Create “layers of challenge”
- Let players choose difficulty level
- Playtest with a variety of players
- Ensure sufficient challenge variety

Balance #3: Meaningful Choices

- Player should always have meaningful choices
- Avoid
  - 10 cars that drive the same
  - Choices of weapons when one is clearly superior
- Match choices with player desires
- Balanced asymmetric risk:
  - Low risk/low reward
  - High risk/high reward

Balance #4: Skill vs Chance

- Are players to be judged (skill) or to take risks (chance) = serious vs casual game
- Is the game tedious? Add elements of chance
- Is the game too random? Enliven with chance
- Alternate use of chance and skill

Balance #5:
Head vs Hands

- Mindless action or intellectual challenge?
- Are there places where brain can relax?
- Can user have a choice?

Balance #6: Competition vs. Cooperation

- Can novices and experts meaningfully compete?
- Cooperation requires communication
- Enhance cooperation with tasks that cannot be done alone
- Give players choice
- Team competition has both aspects

Balance #7: Short vs Long

- Spy Hunter: immunity for first 90 seconds
- Minotaur: Armageddon after 20 minutes
- Hierarchy of time: short rounds comprise a larger round
- Must use playtesting to get right
- Better to leave them wanting more

Balance #8: Rewards

- Fulfill players desires
- Make sure they're not boring or not understandable
- Don't give them too regularly: they lose value
- Relate rewards between each other

1. Praise
2. Points
3. Prolonged Play
4. Gateway
5. Spectacle
6. Expression
7. Powers
8. Resources
9. Completion

Balance #9: Punishment

- Resources are worth more if they can be lost
- Risk is exciting
- Shaming
- Setback
- Shortened play
- Is punishment fair?

Balance #10:
Freedom vs controlled experience

- Full freedom is a lot of dev work
- Total control is boring

Balance #11:
Simple vs Complex

- Simple is usually elegant
- Complex is hard to play
- Emergent complexity is good (Go)

Balancing methodologies

- Doubling and halving
- Document your trials
- Tune the balance as you tune the game
- Plan to balance

Most games are puzzles

How to design good puzzle

Puzzle principles

- Make the goal clear
- Make it easy to get started
- Give a sense of progress
- Give a sense of solvability
- Increase difficulty gradually
- Give multiple puzzles at once
- Pyramid structure extends interest
- Hints extend interest
- Give the answer!
- Perceptual shifts are not always great

Paper prototyping

1. Answer a question
2. Don’t get attached
3. Persuade and inspire
4. Work fast, forget quality
5. Work economically, stay small
6. Decompose problems
7. Prioritize: biggest risks first
8. Parallelize prototypes