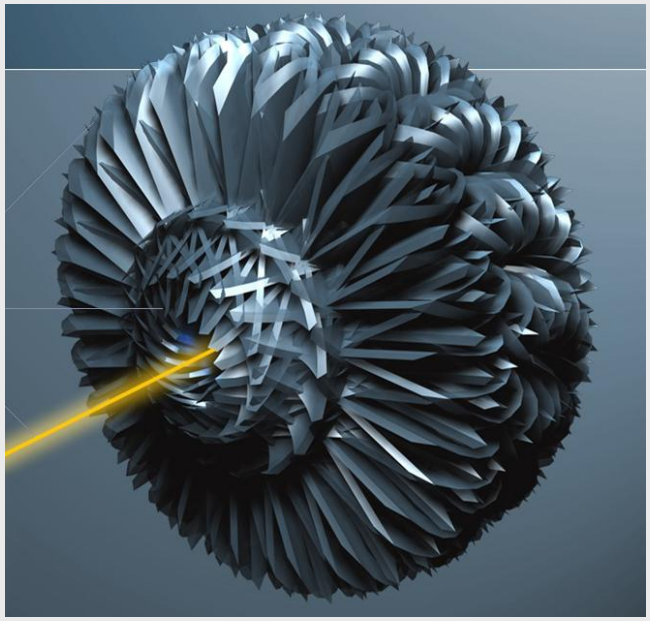

Prototyping

251-257-00L

ETH
Eidgenössische Technische Hochschule Zürich
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Project Structure

Part 1: Formal game proposal

Part 2: Game Prototype

Part 3: Interim Report

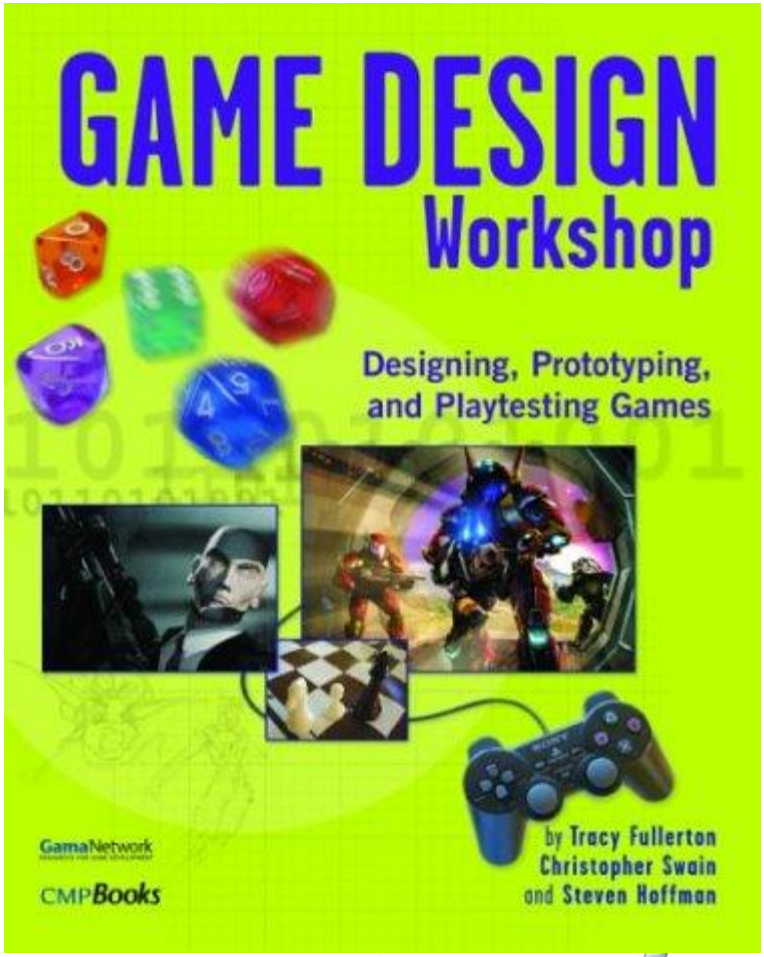
Part 4: Alpha Release

Part 5: Playtesting

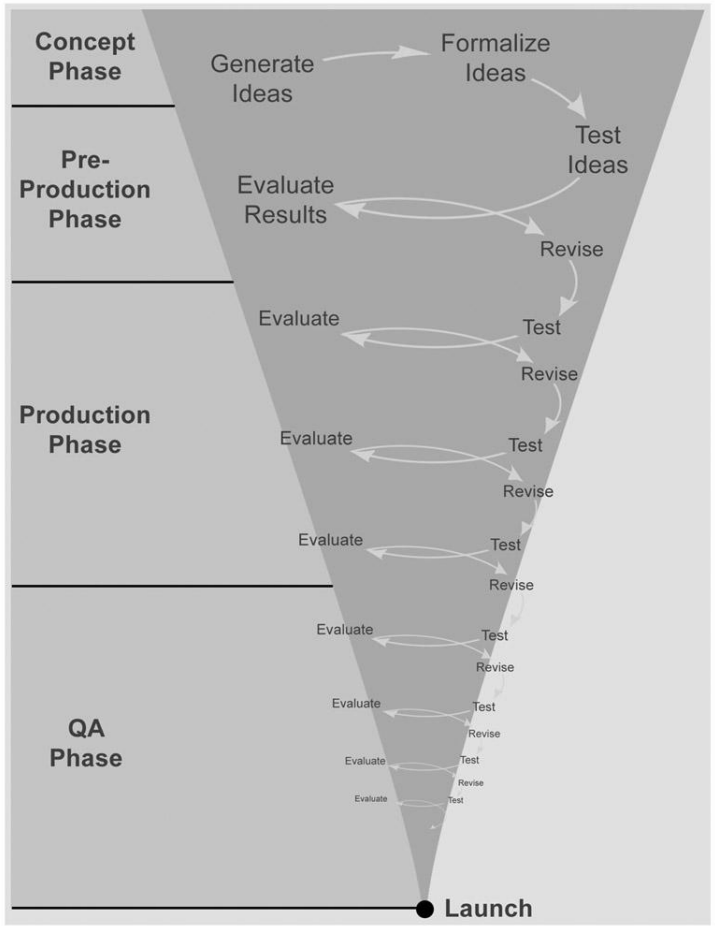
Part 6: Public Presentation + Conclusion

Game Design Workshop

- Prototyping
- Chapter 7
- http://www.tar.hu/gamedesign/index.html



Game Development



Prototype

“Creating an electronic game without a prototype is akin to shooting a movie without a script.”

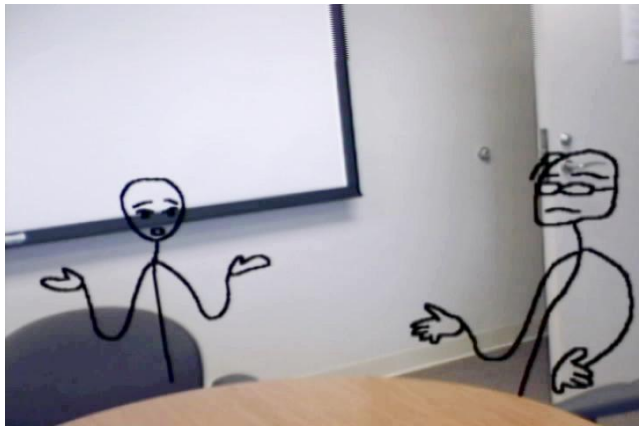
Prototype

- Working version of formal system
- Player(s) and “computer”
- Rough approximation of artwork, sound, features
- No production-related issues
- Only fundamental mechanics
- Informal content, instrument for radical changes

Prototyping Goals

- Define core gameplay in purest form
- Learn whether core mechanics hold interest of playtesters

Role of Prototype



- Test
  - Game mechanics
  - Balance of rules
  - User experience
- Discover play patterns and emergent behavior
  - e.g “Whoever gets the shotgun first, wins.”
  - ...“A successful player always forms alliances early in the game”
- Almost impossible to just “figure it out in your head”

Core Gameplay

- One action player repeats most often while striving to achieve game's goal
- Meaning & consequences change, but core gameplay remains the same
- Single sentence or two, articulated concisely
- Chess? Super Mario Bros?

Core Gameplay: Chess

- Move pieces on a grid in order to capture opponent's pieces
- Additional variables
  - Allowable movement
  - Distribution of pieces
  - Different attacks or defenses
  - Size / shape of grid
  - Health points per piece

Core Gameplay: Super Mario Bros

- Player controls Mario making him walk, run, and jump, while avoiding traps, overcoming obstacles, and gathering treasure.

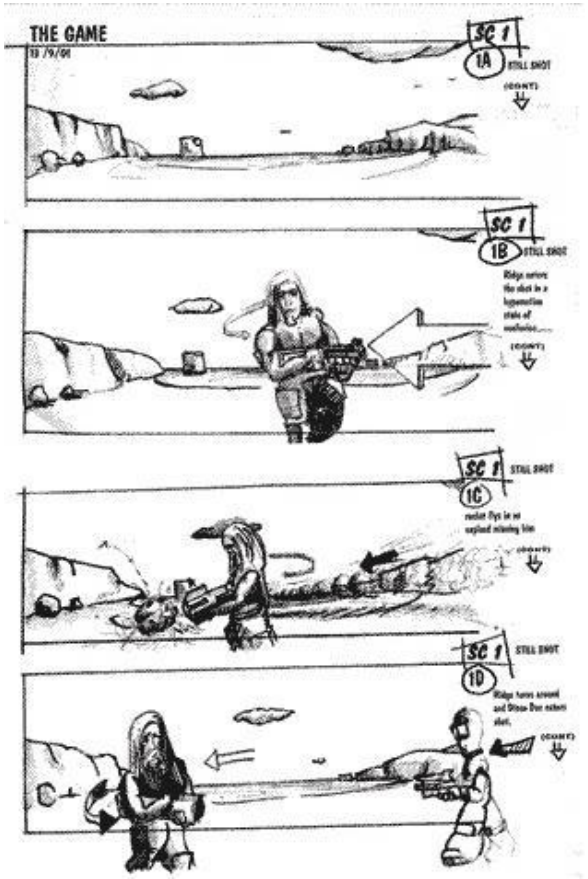
Prototyping Techniques

- Paper prototypes
  - Work well for testing game mechanics, rules, procedures
    - Many video games come from board games
  - Very quick to produce
  - Sometimes hard to capture action or experience of game
    - Some games more appropriate than others

Prototyping Techniques

- Storyboards/Animatics
  - Captures user experience
  - Video can be tedious to produce and change
  - Useful for communicating ideas to others

  See:
  http://video.google.com/videoplay?docid=-5994464494334668806&q=game+animatic&hl=en



Prototyping Techniques

- Software prototypes
  - Flash, Shockwave, Director, VB, Level Editors etc.
  - Can combine with paper techniques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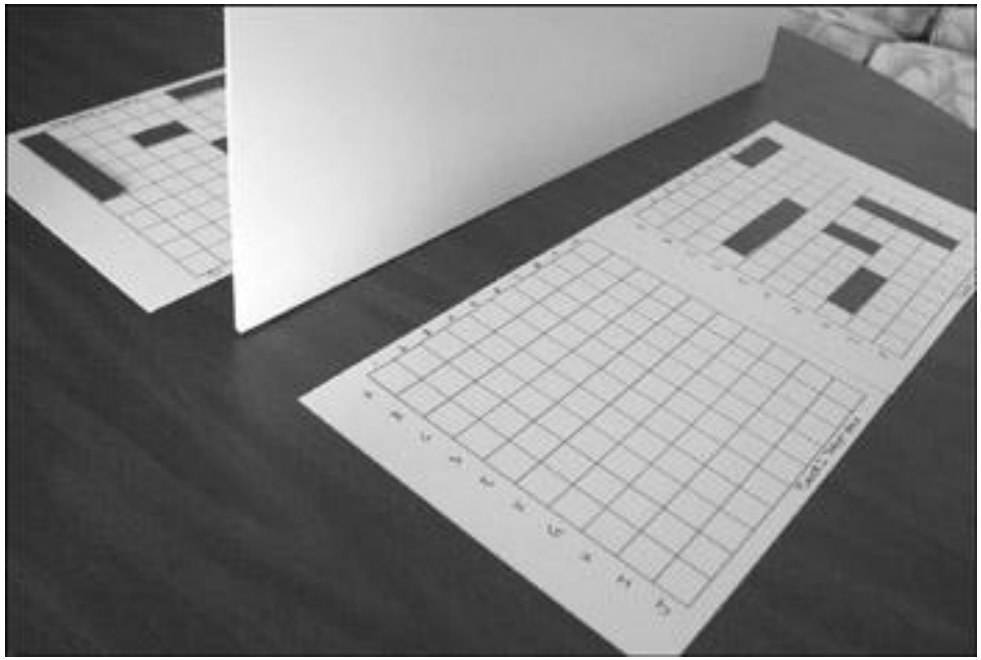
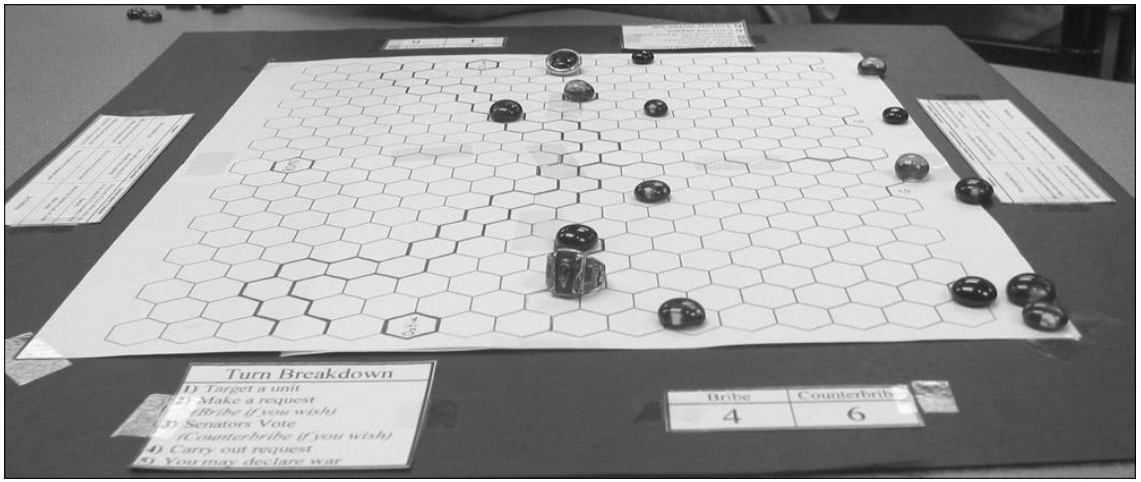
Physical prototype



Prototyping Steps

1. Foundation
2. Structure
3. Formal Details
4. Refinement

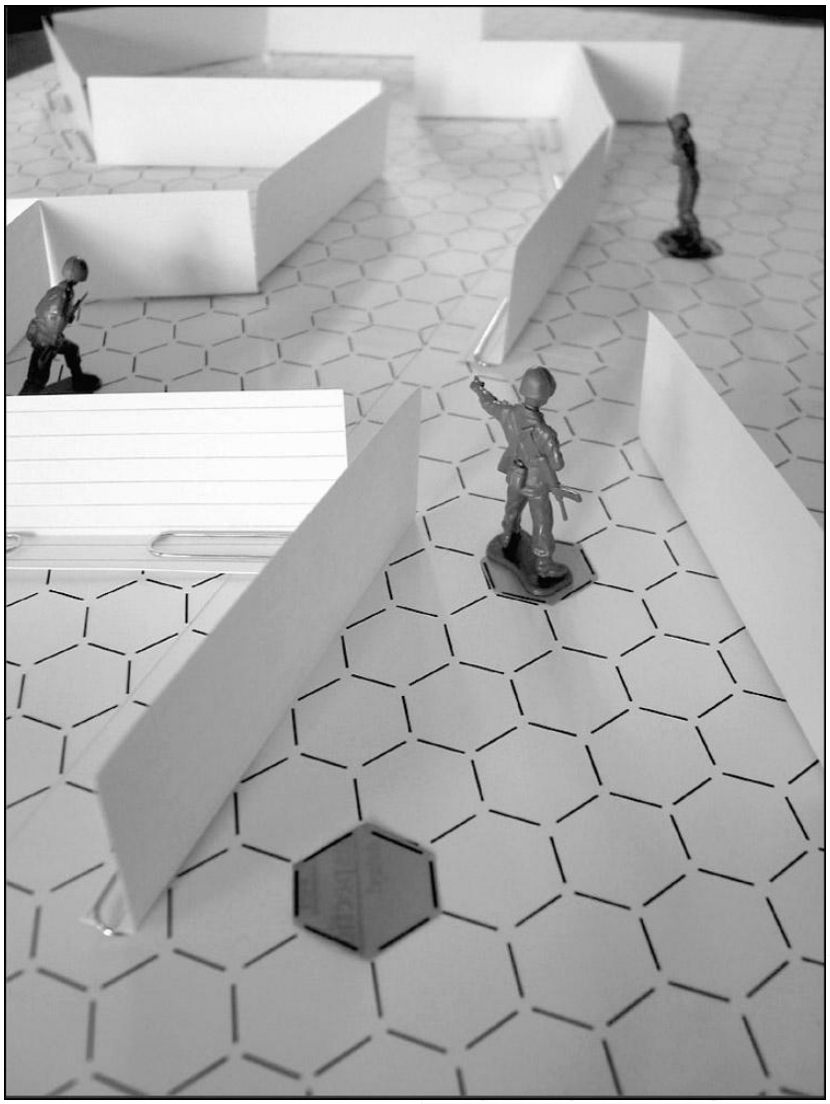


Step 1: Foundation

- Design basic game objects & key procedures
  - Cardboard, paper, glue, pens, etc.
- Test the game, but make note of questions
  - How many squares can a player move?
  - How will players interact with one another?
  - How is conflict resolved?

Step 1: Foundation

- Example: first-person shooter
- Core gamplay: simultaneous action
- Accomplished with action cards



Step 2: Structure

- Prioritize what is most essential, eg:
  - Number of spaces player can move
  - Procedures for turning
  - Hit and miss rules for shooting
- Build upon foundation with structure to support essential parts of game, eg:
  - Scoring system
  - Hit points
- Rules first and features later

Features and Rules

- Features
  - Attributes that make game richer
    - e.g. “you can sabotage your neighbors lawn with poison”
- Rules
  - Modifications to the game mechanics that affect how game functions
    - e.g. “lawns that are not original get less points”
- New features need new rules

Step 3: Formal Details

- Add rules & procedures for a fully functional game
- Focus on most important formal elements
  - Is objective interesting & achievable?
  - Is player interaction ideal?
  - Are there missing rules?
- Can test each rule individually to determine if it is critical or not
  - hit percentage, health, scoring

Step 4: Refinement

- You have a playable system
- Play, tweak, play, tweak, play, tweak, …
- Question smaller and smaller details
- Especially: Is the game fun?
- Add new features one at a time
  - Mine, teleport pads, weapons, monsters, …

Improving Prototype

- Game may feel unplayable, disjoint, slow etc.
  - Don’t panic, debug
  - Strip away rules and reintroduce
- Now the game is playable and fun…
  - Repeat

Beyond Physical Prototype

- Physical prototype -> Digital prototype
- You have a blueprint of core game mechanics
- Focus on controls & interface, visual display, etc.

Questions

?