Computer Games Laboratory - Kick-off

Instructors

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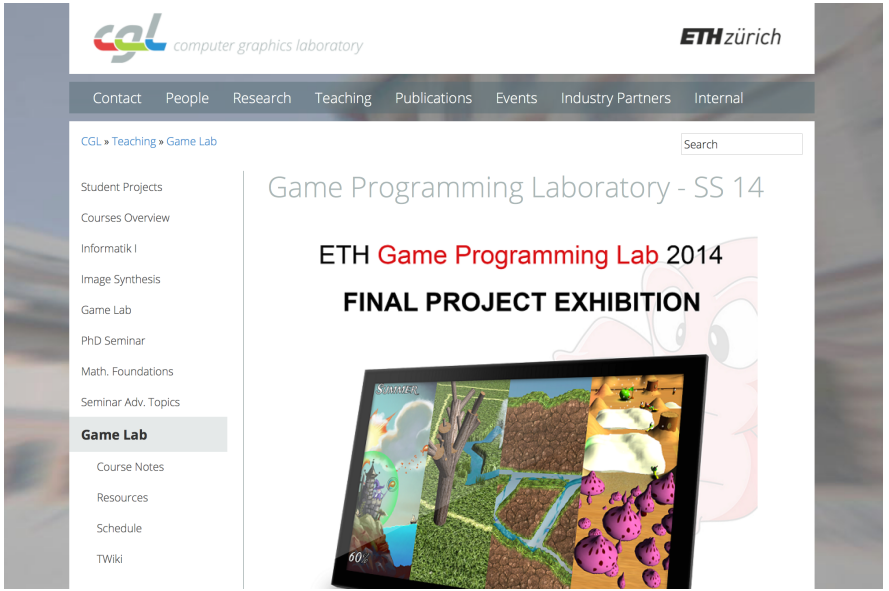
Adopted from: ETH GPL

https://graphics.ethz.ch/teaching/gamelab14/home.php



Acknowledgements:
M. Gross, B. Sumner, S. Heinzle, …

Course Goals

1. Learn central elements of modern computer game design and programming
2. Design & implement your own game project
3. Reinforce CS and graphics knowledge
4. Practice “soft skills” and project management

Course Goals

Capstone course: cumulative knowledge transferred to task of creating video game

Prerequisites

Strong interest in computer graphics and game tech

Ideally, intro/advanced courses in computer graphics

Ability and interest to work in teams

Some artistic skills can help

Time & motivation

Course Elements

Lectures: background & basics, structure

Milestones: delivery deadlines, documentation

Presentations: get feedback, track progress

Grading

We will track your performance
Project plays most important role

- Each of you: private summary of own contributions

Criteria:

- Technical complexity of project
- Project plan and milestones met
- Assignments and Deliverables
- Presentations
- Teamwork
- Creativity

Resources

Main Website:

- https://www.cs.cit.tum.de/cg/teaching/ -> Semester -> Computer Games Lab
- Schedule
- Project structure / assignments
- Lecture slides

Wiki

1. https://wiki.tum.de/display/gameslab2223winter/Home
2. Edit access after forming groups

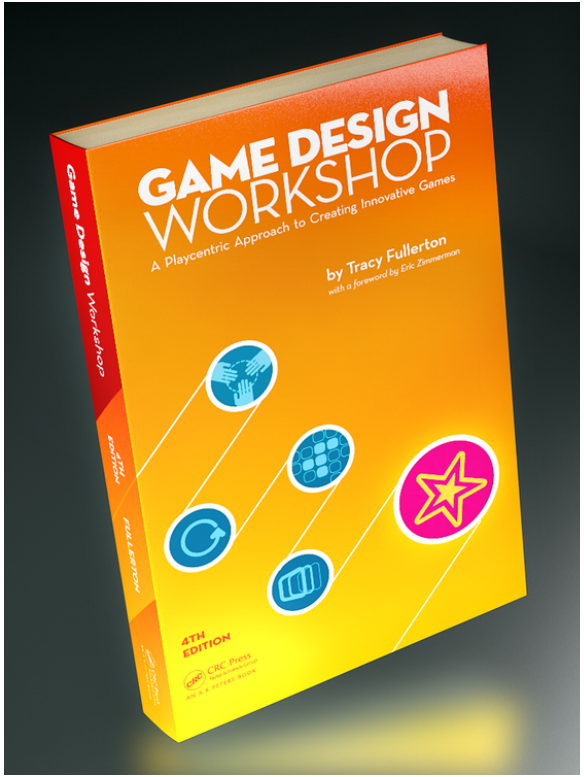
Book

Game Design Workshop

by Tracy Fullerton

http://www.gamedesignworkshop.com/

Available as e-book from the university library



Questions?

Project Structure

Teams

3-4 Students per team

Every member should contribute equally

Considerations

- Interests
- Skills
- Working hours
- Meeting locations…

“Design & implement your game”

But … that’s very challenging!

Detailed project management

- Software engineering principles
- Written project document
  - Actual idea/game documentation
  - Progress & timeline
- Presentations / demos
- Critiques, mutual feedback

Organization

Project structure document (written by us)

1. Found on the course website
2. Contains details about your assignments and deliverables

Detailed project notebook (written by you)

3. Updated for each milestone
4. Upload to course Wiki by Tuesday 23:59 before the milestone meeting

Presentations in class

5. Upload slides to course Wiki by Tuesday 23:59 before the milestone meeting

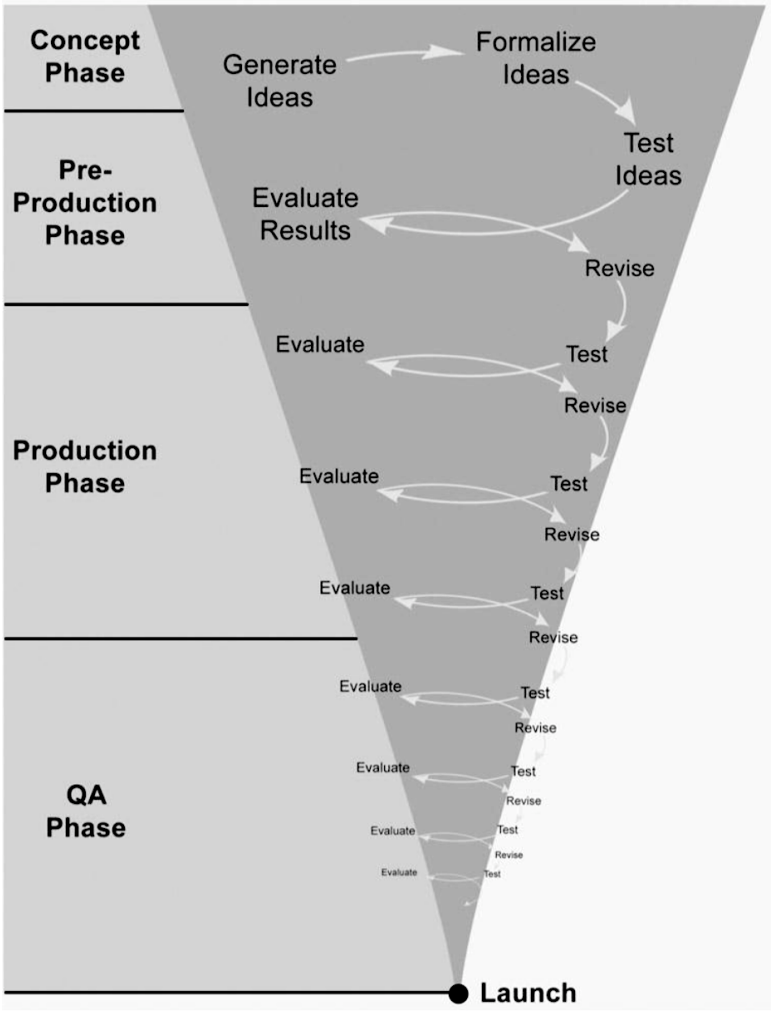
Iterative Design

Keep game on track

Improve upon initial concept

Incorporate feedback

Refine until release



Milestones

1. Game idea pitch
2. Formal proposal & prototype
3. Interim demo
4. Alpha release
5. Playtesting
6. Final presentation!

Milestone #1

Game description
- ca. 1500 words (1-3 pages)
- 3 pages sketches / mock-ups
- Highlight and justify design choices

Development schedule
- Layered task breakdown
- Timeline & milestones

Assessment
- Strengths, appeal, criteria for success…

Development Schedule

Functional Minimum

- Just enough to call it a game…

Your Low Target

- The least possible to feel “ok”

Your Desired Target

- This is what you’re aiming for

Your High Target

- If things go extremely well

Your Extras

- Things you know won’t fit, maybe for later…

Development Schedule

Task	Description	Who	Hrs	Actual
1	Brainstorm design	All	4	8
2	Character modeling	Stan	12	26
3	Camera control	Kyle	6	
4	Prepare presentation	All	6	
5	Explosion effect	Kenny	12	

Development Schedule

Task	Wk1	Wk2	Wk3	Wk4		Wk5	Wk6	Wk7	...
1	A				Part 3 Due				
2		L	L						
3			T						
...									

Advice

Think Small!

Do one thing well

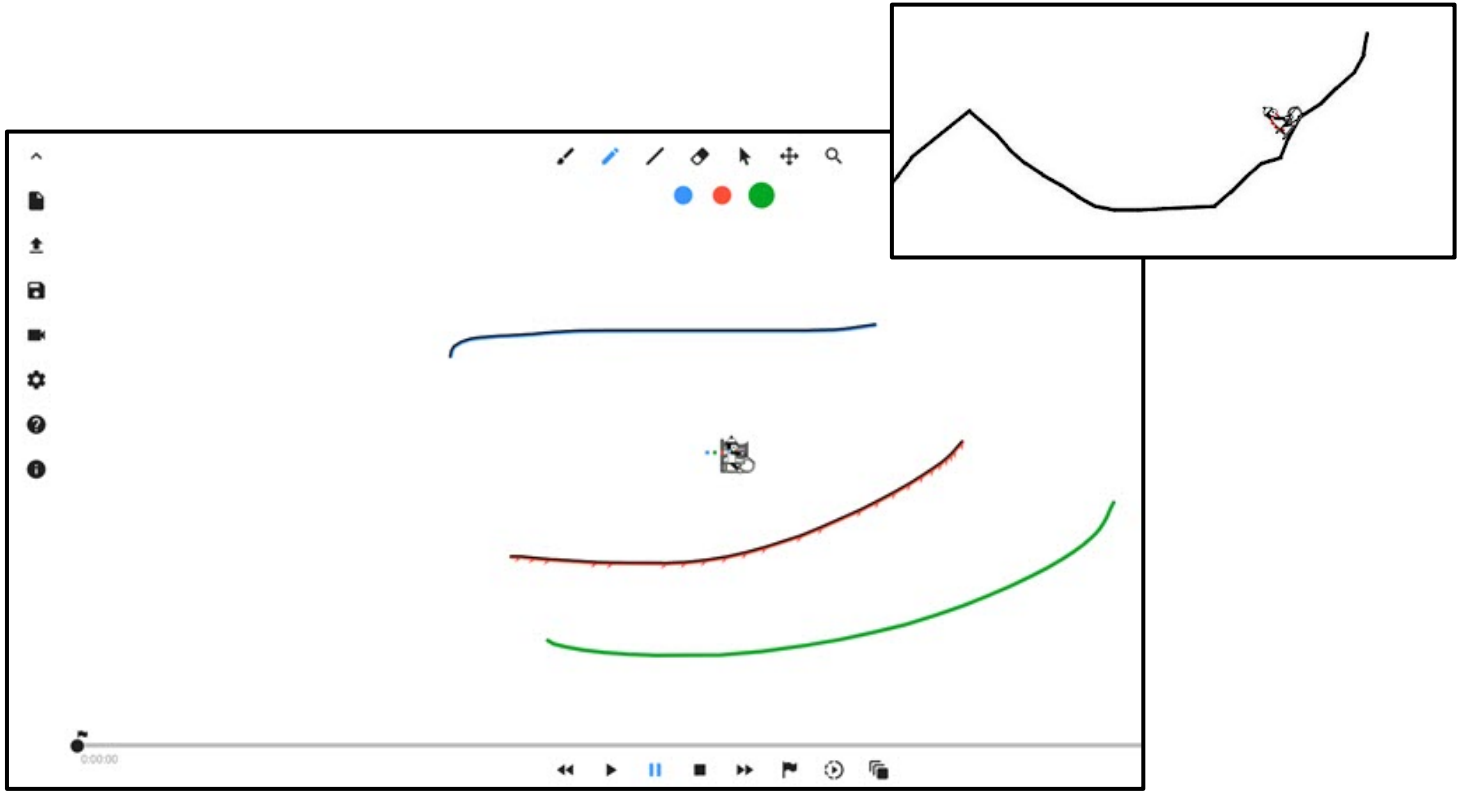
Make game stand out!

Better than doing lots of stuff half-way

Keep the scope of the course in mind

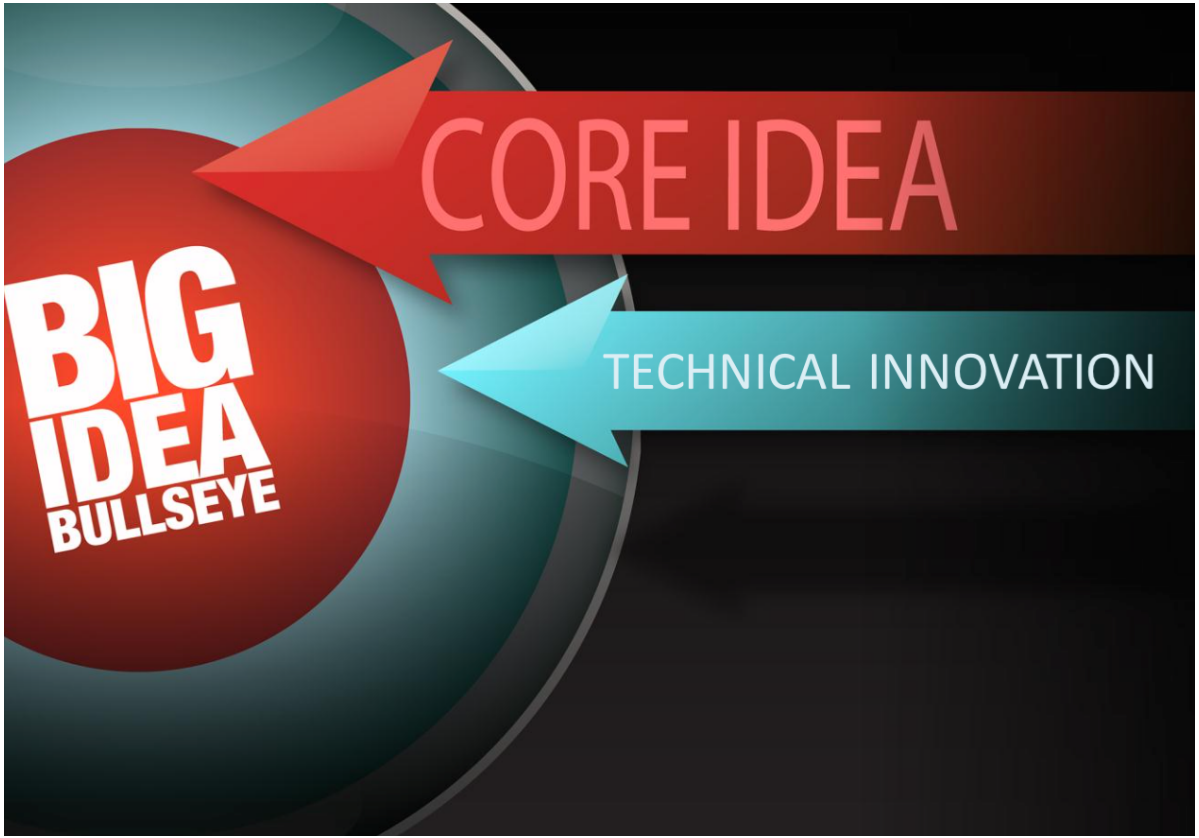
Example

www.linerider.org



Big Idea Sheet

Keeps project focused, common ground



Big Idea Sheet

Example

Further Inspiration

Previous course instances

https://www.etc.cmu.edu/projects/experimentalgameplay/games.php

https://store.steampowered.com/

https://itch.io/

Milestones

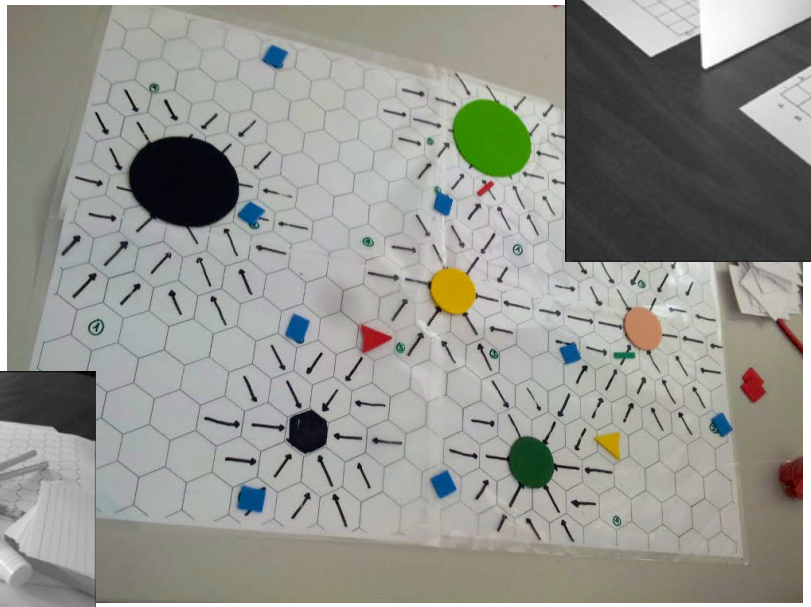
1. Game idea pitch
2. **Formal proposal & prototype**
3. Interim demo
4. Alpha release
5. Playtesting
6. Final presentation!

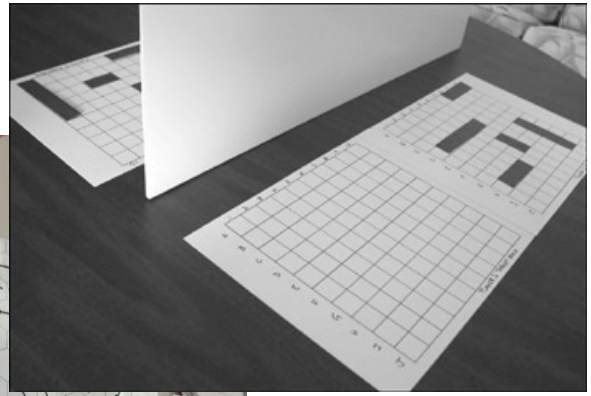
Physical Prototype

Test core gameplay

Iterate and improve concept

Finish design chapter





Milestones

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2. Formal proposal & prototype
3. **Interim demo**
4. **Alpha release**
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Interim & Alpha

Interim report

- Finished layer 2, well into layer 3
- Functional minimum completed!
- Report & demo

Alpha release

- Principle design long complete
- Coding almost complete
- “Freeze” version for play testing

Milestones

1. Game idea pitch
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5. **Playtesting**
6. **Final presentation!**

Final Stages

Playtesting
- Give your game to friends & relatives
- Take notes & make interviews
- Another chapter…

Final presentation
- Present your journey & results
- Conclusion chapter, and video

DemoDay
- Present your game to the public

Milestone Dates

Register groups (Oct. 21)

Game idea pitch (Nov. 9)

Formal proposal & prototype (Nov. 23)

Interim demo (Dec. 14)

Alpha release (Jan. 11)

Playtesting (Jan. 25)

Final release & presentation (Feb. 08)

Demo Day (tbd)

Re-cap Milestone #0

Form and register teams by Friday

Carefully (!) read project structure document

Re-cap Milestone #1

Read project structure document - really!

Formulate game idea, iterate (include this year’s theme)

Game pitch presentations (aim for “exactly” 10 min)

Critiques from everyone! (due 3 days later)

Project Structure Document

Make sure to follow instructions

Detailed deliverables

Especially for milestones 1 & 2

Project Critiques

Get feedback from “outsiders”

Refine your initial idea

Be constructive…

Forming Groups

If you already have a group - great…

If not - stay behind, top priority

Email us by the end of the week!

Platform

No restrictions on development platform!

But - technical contribution has to be clear

If unsure, talk to us…

Game Theme

9 out of 10 designers agree:
“Narrowing focus and imposing limits expands creativity immensely.”

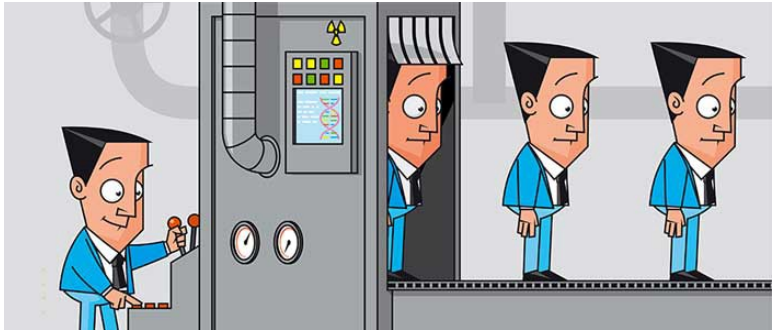
Starting point for visual design

Avoid stereotypes & cliches

Justify your design decisions against theme

Previous Themes

Alien
Historic Places & Events
Large vs. small
the Seasons
Together
Artificial Intelligence
High Contrast
Reflection



Duplicate

Don’t copy an existing game!

Questions?