Foundations of Interactive Game Design (80K)

week one, lecture one
Introductions
TAs, reader/tutors, faculty
If you want to add this class

• As of today, four of six sections had space — most space in Thursday 10am

• If you have questions, start by posting to the class forum, which TAs and reader/tutors will monitor:
Teams and sections

• Games are made in teams of two — if you want to make a game with someone, get them to add the class!

• You should be in the same section as your teammate, but go to any section this week

• If you can both be in one of the non-full sections, that’s great

• If the only section you can both make is full, email the TA — will work out this week
Demo: Mirrorim
by Rob Giusti & Jon Gill
What’s important to a game like *Rock Band*?
Technology

- Game software
- Console
- Specialized controllers
Formal system

Rhythm mechanics

Developing context

Collaborative play
Meaningful media

Rock music, well, *rocks*

People have songs and bands they identify with

People like to pretend: air guitar, karaoke, *Guitar Hero*
Play experience

A structured challenge, moving through difficulty levels

It’s also just a way to fool around

A way to learn to produce music
Social experience

Formal system’s collaborative play

Play in physical space

Formal competition
Understanding computer games
Games are technology

- Physical hardware: consoles (Xbox, Wii, PS3), handhelds (DS, PSP), PCs, arcade cabinets, guitar controllers, etc
- Software engines: Unreal, Source, CryEngine, Flash’s renderer, etc
- Middleware and other components: AI, physics, world management, etc
- Authoring systems: Aurora, Flash, Excel, etc
Games are formal systems

- Game rules: just like card & board games, RPGs, war games, and playground games

- World rules: traditional hide–and–seek gets doors, lighting, gravity (etc) “for free” from the physical world — games have to (and get to) define their own world rules
Games are meaningful media

- Games have text, image, sound: metamedium
- Books, albums, and movies are fixed presentations — games are *media machines*
- Games can tell stories, make arguments, do other things media do — traditionally or procedurally
- Tools from other media useful, but need more
Games are play experiences

- Games only really exist when they’re played
- Games challenge us, and teach us, and entertain us through play
- We often play by/within the rules...
- But pushing at the boundaries of the system, or making unintended use, is important to play
Games are social experiences

- We play with other physically present people (Wii, LAN parties, Rock Band)
- We play with other virtually present people (MMOs, Minecraft, Xbox achievements)
- Our experiences of games are deeply shaped by our participation in online and offline game cultures
What we’ll talk about

• Games as technologies
• Games as formal systems
• Games as meaningful media
• Games as play experiences
• Games as social experiences
• Understanding games and *making* games
Making games

• Game design is important — how formal rules and tuned mechanics produce play (often in fictional worlds)

• A way to understand games — and to use understanding of games

• Requires understanding technology, from high-level concepts (e.g., collision detection) to basic computer science (e.g., variables) and more is useful
Course overview
Course basics

• Syllabus online: http://www.soe.ucsc.edu/classes/cmps080k/Spring11/

• Lecture: T/Th 12:00–1:45pm, Media Theater M110

• Labs: weekly, in Baskin Engineering (BE) 109
Grade components

• Making a game: 53% — using Game Maker, no programming experience required!
• Game analysis: 18% — one-page mechanics analysis and comparative essay
• Quizzes: 15% — given at lecture, covering readings, lectures, section topics, etc
• Also tutorials (7%) and exam (7%)
Quizzes

- Will not be announced
- Will draw on key learning objectives
- Each week I will outline the key learning objectives for the coming week, to help focus your reading and lecture notes (this week’s at end of this lecture)
Making a game

- 2 person teams, using Game Maker Pro (installed in labs)
- Each team will make a game based on their strengths — some programming, some art, some writing, some theme knowledge, etc
- Sections will teach Game Maker, discuss game design concepts, give feedback, and include help sessions
What can you make with Game Maker?
Demo: Abstraction
by Steven Butkus & Audrey Fabian
Game project phases

- Team selection: due week 3
- Concept & physical prototype: due week 4
- Design & schedule: due week 5
- Computational prototype: due week 6
- Progress updates: weeks 6–9
- Playtestable version: due week 9
- Final game: due week 10
Sections

- Each includes one TA and 2 reader/tutors (who did well in 80K earlier years)
- This week’s section takes you through everything you need to know for the first assignment (a customized tutorial)
- If you already missed your section this week, attend another:
Sections

Tu 10:00AM - 11:45AM, John Murray
Tu 2:00PM - 3:45PM, Christopher Maraffi
Tu 4:00PM - 5:45PM, Christopher Maraffi
We 12:30PM - 2:15PM, Serdar Sali
We 3:30PM - 5:15PM, Serdar Sali
Th 10:00AM - 11:45AM, John Murray
Lectures

• Readings from *Game Design Workshop* (required text) or available free online — read for Thursday!

• Lectures by professor and visiting researchers/developers

• Lecture slides posted afterward to aid review — don’t need to write down everything on the slides
Science and Engineering Library is developing a collection of computer games
Can check out NES, SNES, N64, PS2, Wii consoles (have 5 each)
  ► Along with games of design distinction
  ► Go to checkout desk with student ID to check out games
  ► Need to reserve Wii - popular
Classic console lab
  ► Important historical consoles
    • NES, SNES, Genesis, PS1, Saturn, N64, Dreamcast, Xbox, GameCube
    • Soon Japanese PS2
  ► Get key from checkout desk
260+ titles in collection
  ► Deep collection of RPGs and Space Shooters (shmups/STG)
Created specifically for this class, so please take advantage of this resource
Reaching us

- TA email addresses on syllabus
- Office hours — Noah right after this class (in DARC 139), John 12-2pm Wednesday, Topher 3-4pm Thursday, more TBA
Questions now?
Upcoming

• Attend section this week
• Buy the book, *Game Design Workshop* (2nd edition). Should be at Bay Tree
• Read two chapters for Thursday
• Start the first tutorial (due in next section)
• Choose and play a game for analysis 1-page
• Look over the syllabus, start experimenting with Game Maker — play some GM games?
This week’s learning objectives

- Game Maker sprites, objects, events, and rooms (section & tutorial)
- Event-based programming (section & lecture)
- Operational logics (lecture)
- Game mechanics, dynamics, and aesthetics (lecture)
- Playcentric design process (text & lecture)
- Game structure: players, objectives, procedures, rules, resources, etc (text & lecture)
Finally...

start thinking about games and teams