Logistic and Scope

• Today’s session focuses on assignment requirements, game design and the lessons from the past

• Tomorrow’s OpenGL helps session with Zak will focused on coding details

• Please, please, ask questions any time
Welcome to your Game

- This session should help you with your game
- I am not a game design professional – can only share suggestions/experiences
- Ask lots of questions to help guide this talk
Proposed Overview

• Requirements & Deliverables
• Building a Team
• Finding Game Ideas
• Lessons from the Past
• Question and Answers
Game Requirements

- **3D viewing and objects**
  - Your game environment must be a scene consisting primarily of 3D elements

- **User input**
  - Your game must allow players to interact with the game via keyboard or mouse controls

- **Lighting and smooth shading**
  - Your game must contain at least some objects that are "lit".

- **Texture mapping**
  - You must implement texture mapping for at least one of the 3D objects in your video game

- **2 * NumberOfTeamMembers Advanced features**
  - Advanced Feature ~ student-week's worth of effort for each advanced feature
Minimum Game Example

Rescue Dog Max

• Help rescue dog Max find avalanche victims
• Max runs around on a white plane with trees and boulders, “Arrows” control direction, “space” to dig
• The boulders are lit by a directional light
• Scene has a “snow and tree” texture map
• 3D sound used to locate covered victims
• Particle Engine used to generate falling snow effect
Deliverables

• Game Proposal
  – Tuesday, November 12 at 2:00pm

• First Demos
  – Monday November 18

• Final Demo
  – Wednesday December 4

• Video Game Competition (optional),
  – Wednesday December 4 @ 4pm
  – Webpage for Game

• Final Writeup
  – Friday December 6 @ 5pm
Game Proposal

- Most important document to write
- Tool to help you, your team and the staff to plan, think through and shape your work

Source: http://ars.userfriendly.org/cartoons/?id=20020904&mode=classic
Game Proposal Outline

• Game Name
  - Your Game Name and a “Tagline”

• Team Members
  - Everyone on your team, emails and primary contact

• Game Premise
  - “Elevator-spiel” one paragraph describing the game

• Mock-Screenshot
  - Create an image of your 3D world using any tool you want

• Gameplay
• 3D World and Interaction Mechanics
• 2 * N Features – see email
• Special Ideas and tools you may need
Goals for your Game Proposal

- Staff asks only for a 1 page Game Proposal
- The goal is to get your team talking and envisioning your game
- Could every team member explain a full “gaming” session?
- Talk now, use pen and paper - ask yourself what you would do if you had 5000+ lines of code that don’t do the right thing...
Prototype Tools vs. Flexibility

Inclination to prototype in %
Auxiliary Documents

Strongly consider creating these documents as well:

- **Storyboard**
  - “Comicbook” of your game in action – this is a tool, not an art piece, focus on important screens (start, end, game over, win!, etc.), use of graphics, advanced features, and interaction

- **Task list**
  - List of work items, **priorities**, time estimates and owners
  - Priorities should be: Must Have, Priority 1, Priority 2, CUT

- **Schedule**
  - High level calendar when/what should be done, constraints your teammates may have

- **Content/Artwork Map**
  - List of 3D models, textures and images you think you need and where you will get them from
    http://www.gamasutra.com/features/20020903/london_01.htm
Refining initial task list to Excel Spreadsheet

Focus on your “Must Have” tasks first – there should only be a few
First Demos

- The first milestone of your project
- Complete most of the “must have” features so you can show your game play
- Program + some handwaving should be enough to convey a sense of how your game is going to work
Building your Team

- Is anyone still looking for teammates?
Building your Team

• Find people you like to work with: i.e. would I pull an all-nighter with these folks?
• Make expectations clear: What effort are you willing to put in? Do you want to participate in the competition? What grade are you shooting for?
• Are your ideas of a “fun game” compatible? Bunnies vs. Blood and Gore, Puzzle vs. Adrenaline
• If you are unsure about the above, talk with your team or work by yourself
Finding Game Ideas

- Be open minded – even ideas you can’t implement can be used to generate more
- How could we make this game fun to watch?
- How would my favorite film director approach this theme?
- How could the “essence” of a certain graphics technique be used in a game?
- I’ve always wanted to do “x” in real life but could not...
- Literature, photography, music, all contain interesting ideas...
Finding Game Ideas

- What is the “essence” of Quake? What is the “essence” of Civilization, Ago of Empires, Black and White?
Lessons from the past

- Use source control – CVS, Visual Source Safe
- Test your code before checking it in
- Work in the same room if you can
- Have members read up relevant SDKs, techniques, websites and share the knowledge verbally with the team
- Make people experts and owners of areas so they can coordinate the work in that domain
- Build features on the side, test, test, test then integrate
- Think, talk, think, code, repeat is better than code, code, code,...
- Find the right tool for the task - Profiler vs. “printf and getime”, 3DStudioMax vs. “emacs”
Lessons from the past

- Do something exciting to watch - go for the features that will impress people in 5 min. e.g., the perfect feel of control for a soccer kick probably won't come across in the demo, but if you have a screaming ambulance come on the field every time a player gets hurt, that's awesome.
- Creating Artwork takes a lot of time – pilfer the web.
Summary

• Game Proposal
  – 1 Page for staff, use it to bring your team on the same page – everyone should be able to describe the game from “start to game over”

• First Demo
  – First milestone – most “must have” feature for your gameplay should be done

• Final Demo
  – Show off your advanced features and wow the crowd

• Write Up
  – Get some sleep, submit code and readme, create a webpage if you entered in the competition
Questions

• Good luck and have fun – the course staff is eager to help

• cs248-tas@graphics.stanford.edu
• Check the website for new resources
• If you find interesting stuff, write a one-sentence summary and send it with link to the TAs – we will post it on the web for everyone