

# Anima: A singular journey

Or: OpenGL is the easy part

# Project Overview

I wanted to design a game that would follow the journey of a budding AI up through progressively more complex systems.

I also wanted to explore the differences between commercial-grade software and student-project software.

i.e., how much can one polish.

# Broad Strokes - Software

- OpenGL through JOGL for graphics
  - No major problems here
- JFrame to perform windowing
  - Far easier than I thought
- Customized look and feel in Swing for GUI
  - As easy or as hard as you'd like
- JDBC to connect to MySQL database through OpenOffice Base
  - Not the implementation I thought - scrapped

# Broad Strokes - Process

- Modified XP approach to ensure release viability
  - User stories – good guidance metric
  - Iterative development – semi-stuck to
  - Test-first development – good for game logic, not for graphics, less game logic than I thought
  - Refactoring – very handy
- Increasing graphical complexity of project as semester goes on
  - Allows for development of OpenGL knowledge
    - This has worked out well



# Implementation Objectives

- Fully 3d environment in later levels
- Polished interface
  - Splash screens for loading and level changes
    - Not on that iteration, got behind schedule
  - Fullscreen display for game environments
    - No problems here
  - Customized look and feel to hide common Swing features – yes and no
  - Full soundtrack and sound effects – slight issues
  - Player profiles/player lounge – stubs till end

# Game Outline

- Level 1 – Inside register – Binary addition
  - Good introduction, 80-20 rule
- Level 2 – Inside CPU – Projectile dodging
  - Felt a little repetitive, working on polishing
- Cutscene 1 – First 3D component, low-flying journey over northbridge and out to main memory, initially neon-wireframe
  - Blender issues

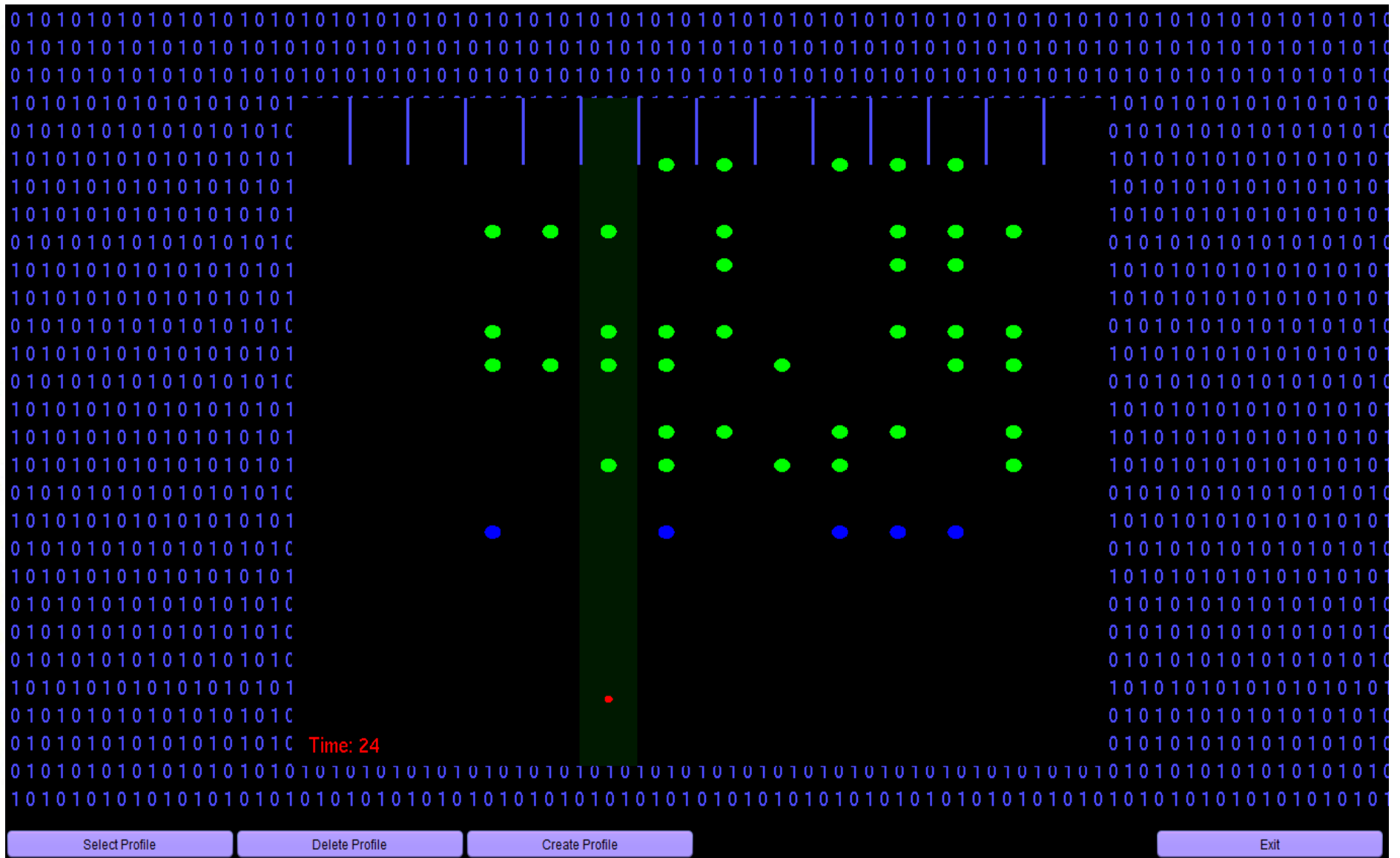
# Game outline - continued

- Level 3 - Main memory – more strategic, player shifts through regular polygon forms
  - Felt clunky, scrapped and redrawn
- Level 4 – Computer system – first 3D level, bus line navigation with texture mapping, forging new body
  - Adapted graphics assignment logic with redrawn environment and refined controls
- Cutscene 2 – Not there yet

# Game outline - Final

- Level 5 – wicked awesome stuff - tbd
- Final cutscene – See above





# Architecture

- Main class GameManager displays background, manages profiles/player lounge and calls other modules.
- Moved event handling to inner classes
- Classes for each successive level, as well as sound

# Conclusions

- Game logic less taxing than anticipated
- OpenGL friendlier than expected
- Game story/environments more difficult than anticipated
- Blender is awesome but evil

# Going Forward

- Iteration 1 – 3/13 – First two levels & interface
- Currently on iteration 1.5 but should finish that up tomorrow.
- Unfortunately leaves only a single weekend for final details such as cutscenes and polish