

**MICHIGAN STATE**  
**UNIVERSITY**

# Beta Presentation

## Design, Fly and Compete

### The Capstone Experience

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*From Students...*  
*...to Professionals*

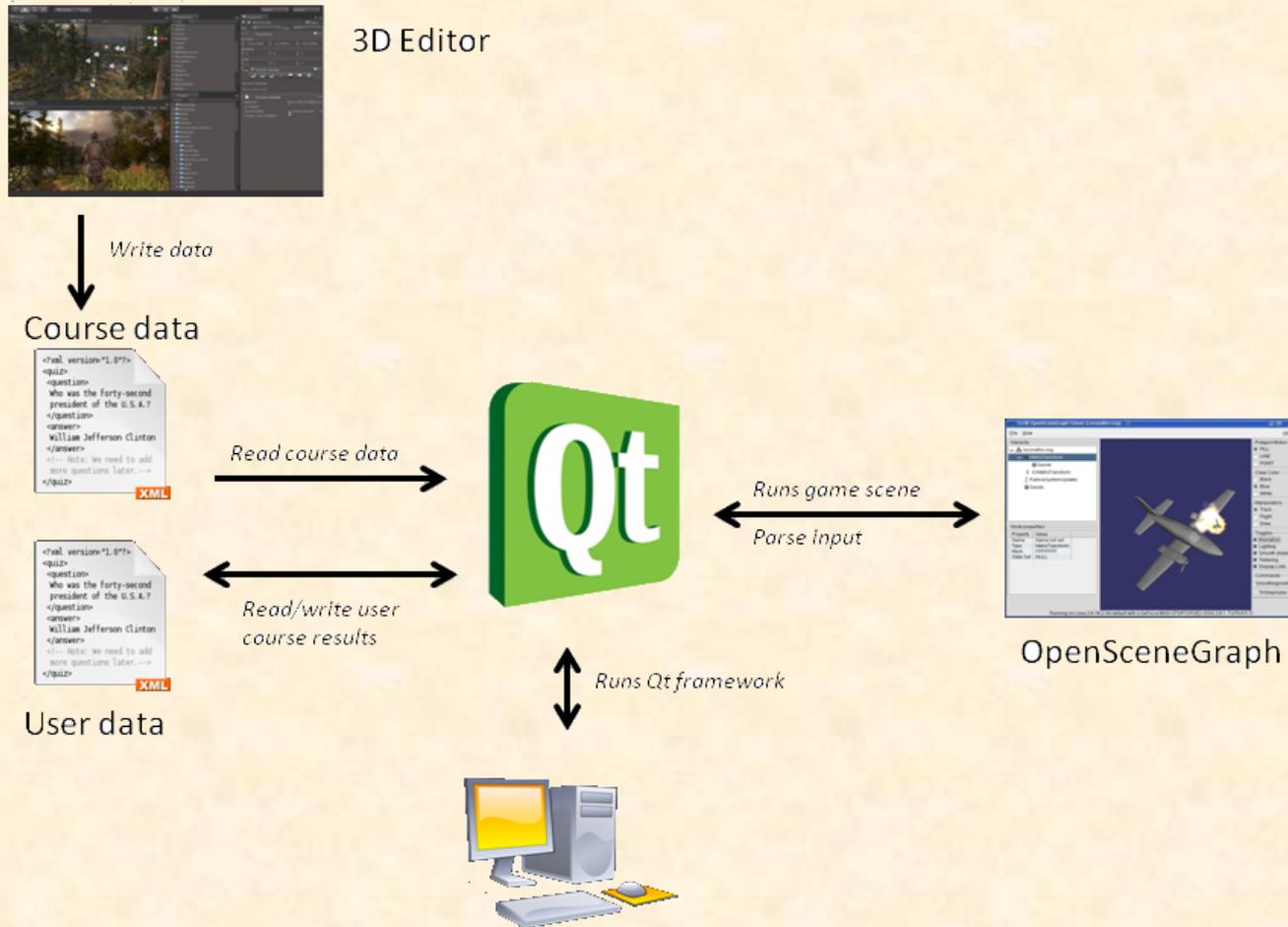
# Project Overview

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- “6 Degrees Of Freedom” flight model
- Full single player experience
  - Multiple aircraft
  - Diverse obstacle courses
- High graphical fidelity
- Persistent stat tracking
  - Obstacle course results
  - Multiple users



# System Architecture



# Menu

**Design, Fly and Compete**

Single Player

Options

Play

Quit

## OBSTACLE COURSE

### Choose a Level

End

Start

Wind ←

Light

### Choose an Aircraft

Acceleration: 15.0 m/s<sup>2</sup>  
Length: 61.66m  
Weight: 92,080 k

Top Speed: 500 m/s  
Manueverability: C+  
Wingspan: 25.6 m

- Course 1
- Course 2
- Course 3
- Course 4
- Course 5
- Course 6
- Course 7

- Aircraft 1
- Aircraft 2
- Aircraft 3
- Aircraft 4



# In-Game

Velocity: 111 meters/s  
Altitude: 362 meters  
Heading: 358 (North)

Wind: 4.2 meters/s (From the East)

Fuel: 492 liters



Rings Remaining: 5  
Time: 17.3323



# In-Game (Different Aircraft)

Velocity: 241 meters/s  
Altitude: 354 meters  
Heading: 187 (South)

Wind: 4.2 meters/s (From the East)

Fuel: 448 liters



Rings Remaining: 4  
Time: 62.6212



# Crash Result

Velocity: 408 meters/s  
Altitude: 16 meters  
Heading: 14 (North)

Wind: 4.2 meters/s (From the East)

Fuel: 476 liters

Score

22.5052 seconds!

Rings Remaining: 4  
Time: 34.7591



# What's left to do?

- Courses!
  - Tier progression 1-4
  - Pictures
- Clean up plane data
  - Iterate flight model slightly
- Project video (obviously)
- Explore possible UI fix
- Installer package

