What is a Video Game?

Author Name:honghu

University Name: Zhejiang Normal University

1. introduction

- “The things that games are built on”
- Games have a ton of functionality in common
- Even beyond superficial things typically defined by genre or gameplay
- Why re-write those same sets of functionality every time we want to make a new game?
- Generalizable system providing a set of useful, flexible components

• Generalizable - “Could other games use this functionality?”

• Useful - “Would other games benefit from using this functionality?”

• Flexible - “Can a game tweak how the system behaves to get a desired

effect?”

• Implemented as a framework or a library

• Frameworks dictate control flow

• Libraries do not dictate control flow

• Your engine will use both design patterns

2. Who’s involved in making a game/engine?

Team Roles:

Art director

Game publisher

Game designer

Sound maker

Lead programmer

3 Overview

Demand analysis -- Outline Design -- Detail Design -- encoding -- unit test -- integration test -- system test -- maintenance

4 Methods/Techniques

(1);Graphics: Renders
DirectX
OpenGL
HTML canvas/WebGL
Platform specific rendering
Everything is triangles
and Textures
and Lightning
and Shaders
(2) ;Render - viewport(3D)
(3);lightning
ambient
point
spot
directional
self-illuminated
(4);animation - mesh/morph
high accuracy
very expensive
data storing
(5)animation - motion capture

5 Conclusion

The steps required to meet the needs of the software product that meets the needs of the project. The software engineering process mainly includes the development process, the operation process and the maintenance process. They cover the requirements, design, implementation, validation, maintenance and other activities. Demand activities include problem

analysis and demand analysis. The problem analysis to obtain the definition of requirements, also known as software requirement specification. Needs analysis to generate functional specification. General design including outline design and detailed design. The outline design to establish the structure of the entire software system, including subsystem, module and relevant levels, each module interface definition. The detailed design of the module that can produce programmers, including the description of data structure and processing of each module. The activities of the design results into the executable program code. Validation activities throughout the development process, confirmed after the completion of the implementation, to ensure that the final products to meet user requirements. Maintenance activities include expansion and refinement, in the process of using modified