

Videogame development team

Videogames Technology

Objectives

- Understand the roles in game development
- First contact with the main game development problems
- Introduce basic vocabulary

Bibliography

1. Desarrollo de Videojuegos, Arquitectura del Motor de Videojuegos. UCLM.
2. Tynan Sylvester. Designing Games. O'Reilly
3. Wikipedia

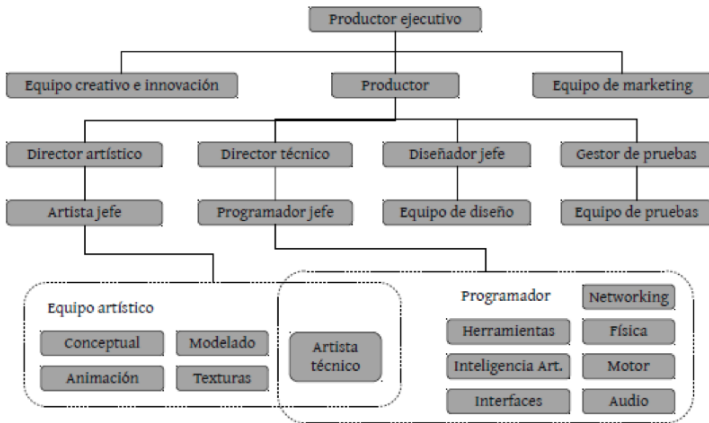
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Overview (I)

- Videogame development is highly multidisciplinary
- From a computing perspective
 - Hardware, peripherals, ...
 - Videogames software engineering, usability, gameplay, graphical computing, AI, ...
- From a non-computing perspective
 - Creative team: Artists, graphical designers, creatives, musicians, level designers, ...
 - Marketing and management
- Three big teams
 - Marketing: Game sales
 - Creative and innovation: Conceptualisation of new games
 - Production: Game implementation

Overview (II)



Source: Desarrollo de Videojuegos, Arquitectura del Motor de Videojuegos. UCLM.

(More info)

Design team (I)

- They design the videogame structure
 - Story, sequence of chapters, game rules, goals, characters, write dialogs, hint system, etc
- Key concept: **Level designer**
- It works coordinated with the engineering team
 - Designers have programming tasks: NPC behavior
 - They use high-level script languages
- Script language: Interpreted language that is not compiled
 - General languages: LUA, Python, Ruby
 - Specific languages: LSL, AngelScript, GameMonkey, Io, Pawn, Squerrel, etc

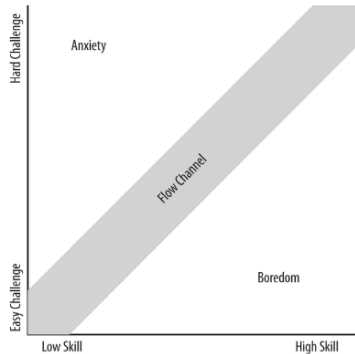
(Video 1)(Video 2)

Design team (II)

Emotional triggers

Games should evoke emotions

- Learning
- Character arcs
- Challenge
- Social interaction
- Acquisition
- Spectacle
- Beauty
- Environment
- Newfangled technology
- Primal threats
- Sexual signals



Tynan Sylvester. Designing Games. O'Reilly

Design team (III)

Designing characters

Main character and antagonist

- Goals
- Motivation
- Psicology
- History
- Skills
- Weapons
- Uniqueness

Level bosses

- Characteristics

NPCs

- Ally
- Enemy
- Neutral

Design team (IV)

Design document

Design document

- Describes how the game is going to be
- Part of the creative process
- Used to gather funds

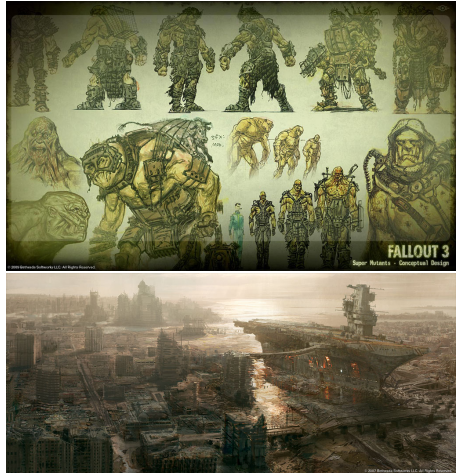
Contains

- The story
- Characters description
- Sequence of levels
- Game mechanics
- Physics descriptions
- Conceptual art

(Maniac Mansion design document) (Maniac Mansion on-line)

Artistic team

- It creates the game art
- Roles in the artistic team
 - (Conceptual artists)
 - (Modellers)
 - (Texture artists)
 - Illumination
 - Animators
 - Sound designers
 - Actors
 - (Motion capture actors)



Artistic team

Tools

2D design

Photoshop, Gimp, Illustrator, ...

3D design

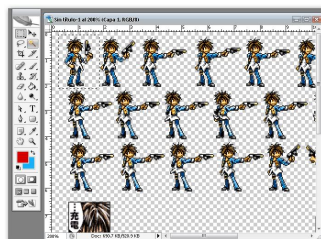
Blender, Maya, 3D Studio Max, Lightwave, Modo, ...

Video editors

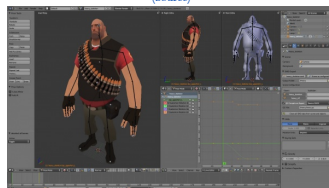
Cinelerra

Sound editors

Audacity



(Source)

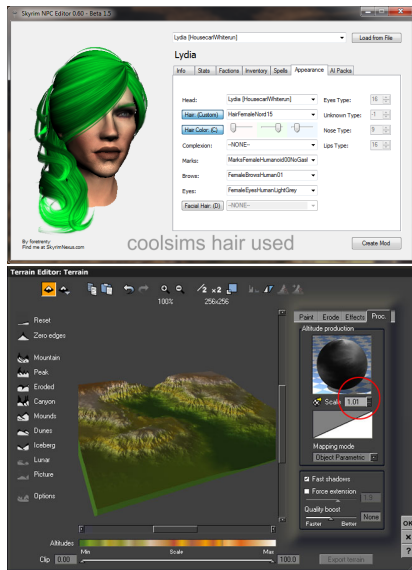
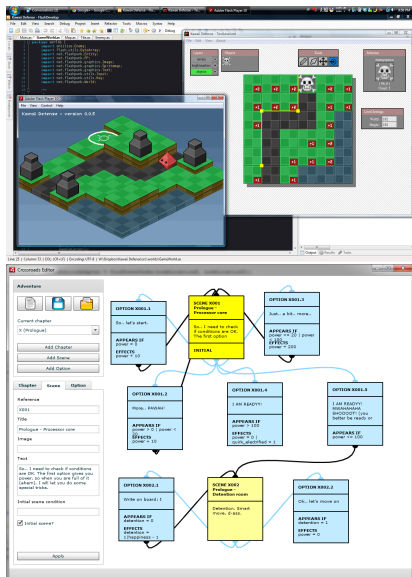


(Source)

Engineering team (I)

- It designs and implements software
- Kernel programmers: Game kernel and components
 - Physics, AI, graphics, sound, gameplay, scripting, UI, input processing, networking
- Tools programmers: Support tools for other teams
 - Level editors
 - Dialog editors
 - 3D modelling
 - NPC editors and testers
 - Landscape generators, etc
- Development tools may be published

Engineering team (II)



Engineering team

Quality team

- Also known as testing, beta testing, quality control, ...
- Testers look for bugs
 - Technical bugs
 - Entertainment issues
- Testing involves:
 - Features, compatibility, localization
 - Active search of bugs
- When a bug is found, testers must document it
 - Bug tracking software: Redmine, Jira, Bugzilla, ...

(More info)