

Videogame development team

Videogames Technology
Asignatura transversal

Departamento de Automática

Objectives

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

Bibliography

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

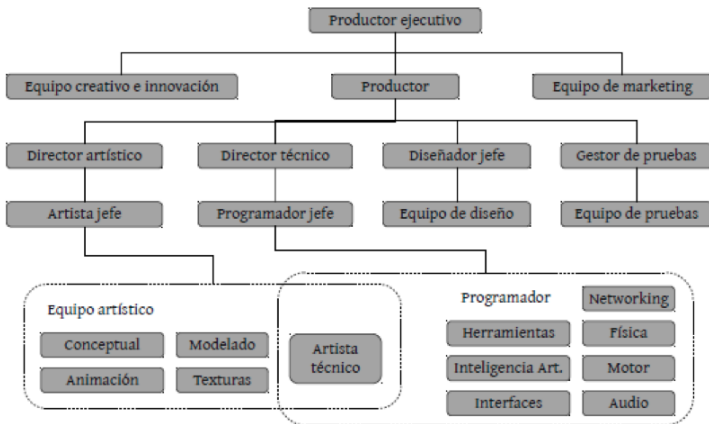
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Overview (I)

- 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 mechanics, 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
- Tools for level design
 - Ad-hoc tools
 - Integrated in the game engine (Unreal, Unity, etc)
 - Specialized tools: Tiled

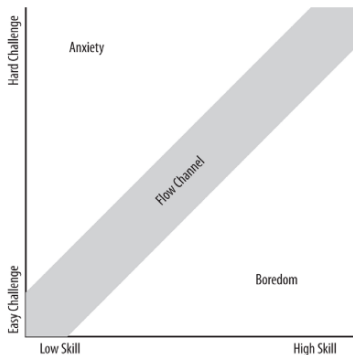
(Video 1) (Video 2)

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)

Narrative: Three acts

Traditional three-act structure

- Act I: Setup (introducción)
- Act II: Confrontation (nudo)
- Act III: Resolution (desenlace)

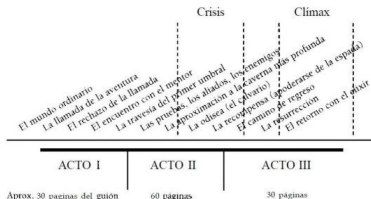
Design team (V)

Narrative: The hero's journey

EL VIAJE DEL HÉROE



El modelo del viaje del héroe



(Source)

(Video)

Design team (VI)

Design document

Game design document (or **GDD**)

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

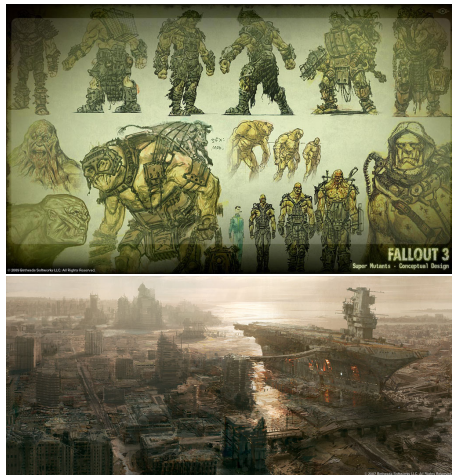
Contains

- 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

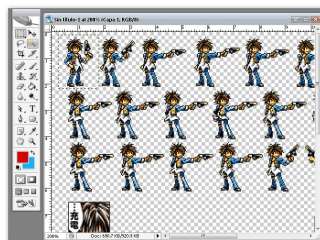
Blender, Maya, 3D Studio Max, Lightwave, Modo, ...

Video editors

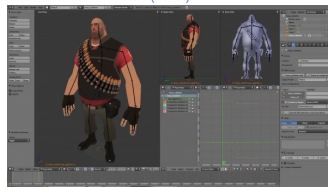
Cinelerra

Sound editors

Audacity



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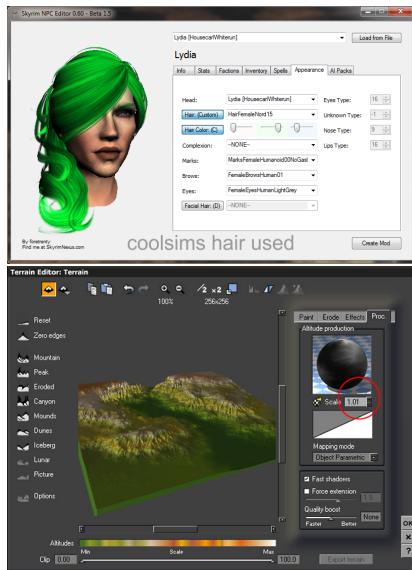
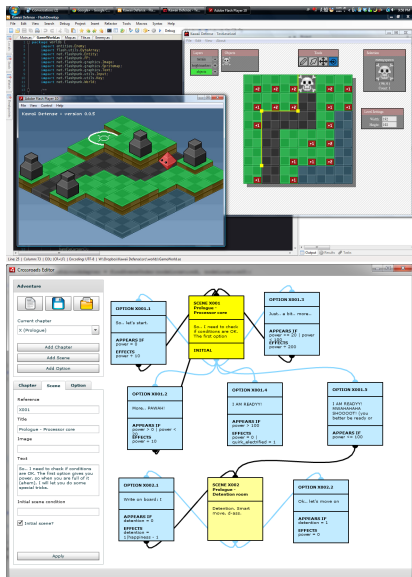


(Source)

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, ...

(Fallout 4)

(More info)