

Video Game Design

Chapter 4 Game Development Process

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Some Stat.

- 65% of all Americans play video games in 2008
- Computer/video game industry gradually grows.
 - \$9.5B/year for U.S. Sales in 2007
- Development
 - Costs \$3M to \$10M to develop average game
 - Over \$100M to develop Grand Turismo 5 on PS3.
 - Takes 12-24 months
- January 2010
 - Wii 66M, Xbox360 37M, PS3 31M unit sold

How they make money

- Software developers & publishers
 - Game sales (Retail box or Download)
 - Online game
 - Initial game (Retail box or download)
 - Monthly fee
- Console developers
 - Proprietary media delivery (DRM) & fee for each game sold (download game or content)
- Tool developers
 - Sell game engines, middleware, or tools
- Contract services
 - Artifact, motion capture, art, cut-scenes, sound, ...

Who play roles

- Hardware:
 - Sony, Nintendo, Microsoft, Intel, AMD, Nvidia
- Software:
 - Publishers
 - Electronic Arts, Activision, Sony, Microsoft, Infogrames, UbiSoft, Interplay, Nintendo, THQ
 - Developers (game studio)
 - Electronic Arts, RockStar, Sony, Microsoft, Blizzard, Lucas Arts, id soft, Techmo, Bioware, Namco, Square Enix, Valve, Raven, Relic

Business Chain

- Developers (work hard like bees)
- Publishers (Big-boss and Capital)
- Distributors (Almost gone)
- Retailers (Shelf master)

Developers

- \$73,000 a year (2007 survey)
- Design and implement games
 - programming
 - Design
 - Art & Animation
 - Sound effects and music
 - Production
 - Quality Assurance

Publishers

- Support game development
 - Money, Technology, marketing/PR, distribution, and support
 - Take most of the risk /take most of the profits
 - Big-boss writes the rules
 - Merging often occurs
 - Most develop by their own studios (in-house)

Mile Stone

- Most Publishers use mile stone to evaluate the project.
- Decide which projects should go forward “Green light process”
- Major mile stone in five stages:
 - Concept (game design document)
 - Assessment (analysis report)
 - Prototype (Mock up)
 - First Playable (one level)
 - Alpha (Q/A)
- At each stage, committee reviews:
 - Decides whether or not to continue funding

Mile Stone

- Every stages, publisher board reviews
 - Decides whether or not to continue funding
 - Evaluates market potential (Block buster?)
 - Make some small changes according to some factors
- Most publishers want to minimize their risk
 - May limit new ideas
 - Successful sequel would welcome
 - Discontinue project might better than disaster of sale figure

Distributors and Retailers

- Distributors
 - Get software from publisher to retailer
 - Almost gone because (retailers deal with publishers)
- Retailers
 - Mass market
 - Over the shelf
 - Sell or rent software
 - Special deal & discount

Development Team

- Early, solo/duo or garage team
- Today, from 10-60 people
- Programming team is smaller
- Art team is larger
- Artwork usually take more time than coding

Development Team

- Executive Producer
- Producer
- Project leader
- Programmers
- Lead Designer
- Game Designers
- Architecture lead
- Writer
- Level Designers
- Software Planer
- Modellers
- Animators
- Artist
- Audio Design
- Sound Engineer
- Q/A tester
- Live support team
- Live team for online

Time

- 12-24 months
 - then long vacation
- Crunch (serious period of working)
 - use it for good (motivation, achieve mile stone)
- Long period of hard work
- Stress will be released after release?
- Balance your life (work & home)

Process

- Creativity & Inspiration (a month)
 - finding the idea and put it to a document
 - make a decision to hold or go for it
- Conceptualization & Wrap up idea (2-3 months)
 - write a complete game design document
- Plan (1-2 months)
 - create project plan
 - divide project to phases with specifications

Process

- Architecture design (2 months)
 - create game architecture with specifies tools and technologies
 - decide about tools, engine and technical specifications
- Create Tools and engine if need (4-5 months)
 - create or reuse tools
 - 2D & 3D graphics engine, level builder, or unit builder
- Integration (12-14 months)
 - build a game from the game design document
 - a complete game software and in-house tools

Process

- Level design (4 months)
 - create the levels for the game with all levels, in-game tutorials, and manuals
- Testing (3-12 months)
 - Overlap & parallel testing from design to release
 - Verification & Validation
 - testing the code, the gameplay, and the levels
 - Try to find bug and some dent in game
 - Polished to make a master piece

Prototypes

- Proof of concept
- Publisher will understand your game and to test gameplay
- Show your ability and potential finished it
- Most of publisher make a decision from this
- Team shared the same vision & concept

Problems

- Development cost is a sky rocket
- Too many risk
- Time to market
- Games are more complex
- Many projects fail
- Many companies go bankrupt
- Few game make profit

Revolution in process

- Well organize with a good plan
- Team is the most valuable resource
- Choose the right software process to develop
- Agile based method
- Project management
- QA test & polishing

Conclusions

- Game development process requires time and effort.
- Many people involved
- Publisher & developer relationship
- No standards or rules for game development process

“Play game is fun than make it”
“Game developer might not be a dream job.”

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