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# Sound Practices of Games Business and Design

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## "Soft" Problems for Games Businesses

- Game design
- Storytelling
- Marketing
- Customer experience



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## The Engineering Approach

- Define your goals
- Come up with an idea of how to meet them
- Perform an experiment to test the idea
- Evaluate the quality of the experiment
- Evaluate the quality of the idea
- Evaluate the quality of your goals
- Repeat



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## Necessary Ingredients

- The right attitude
- The right people
- Well-defined goals
- Well-communicated goals
- Well devised tests



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## Setting Goals

- “Product focus” helps you define good goals
- Filter all goals through the lens of customer experience
- Seek helpful constraints
  - Don’t try to solve boundless problems
- The “hardcore gamer” problem



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## Engineering Game Design

- Goal is a fun game
- Ideas are your game designs
- Playtests are your experiments
- Evaluate your designs as a result of playtests



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## What does "playtest" mean?

- QA?
- Balancing?
- Focus testing?
- Fun?



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## Running a Good Playtest

- Are playtesters having the experience you designed?
- Is the experience you designed desirable?
- Learn about things that affect customer experience
  - Game code/NPC behavior
  - Effects art
  - Environmental art
  - Sound
  - Training
  - Pacing
  - Difficulty





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## Running a Good Playtest

- Make sure the people responsible for the design and execution are there
  - Simplifies evaluation
  - Prioritizes
  - Motivates
- Don't gather stats!
- Use external playtesters
- Don't say anything to playtesters
- Ask playtesters to speak through what they are thinking while they play



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## Questioning Playtesters

- Don't rely too much on questions
- Oftentimes you learn more from what playtesters **don't** experience
- Ask non-leading questions
- Can be great for measuring effectiveness of certain elements
  - Storytelling
  - Perception





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## Design Iteration

- Oftentimes this occurs late in production
  - Some of your designs work, others don't
  - Fix the most egregious problems
- The "legendary" designer
  - A designer whose designs always work
  - We have no such designers at Valve



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## Playtesting as Production

- Use playtest results to drive production!
  - Create 15 minutes of gameplay in rough form
  - Playtest
  - Use playtest to prioritize work for next week
  - Repeat until complete



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## Playtesting as Production (Half-Life 2)





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## Small Increments

- Do the smallest amount that lets you learn something about the player experience
- Use 1-2 week increments
  - Less results in not enough time to make changes
  - More results in churn and flail
- Build about a few hours of game, then start again
  - We felt done as soon as playtesting was no longer painful to watch



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## Tech development

### ➤ Options

- Build a new engine
- Build off your previous title's engine
- Use a licensed engine

### ➤ You do need to do some up-front work

- But not too much -- this was our big mistake on Half-Life 2

### ➤ Use iterative tech development

- Identify key technology bets – do those first



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## In Theory

- Don't let theoretical problems prevent playtesting
  - They might not actually be problems
  - If they **are** problems, the playtest will prioritize which to solve first
  - Playtest may generate ideas of how to solve actual problems better
- Don't discard game designs on theoretical problems





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## Other Benefits

- Useful for idea generation and learning
- Easy to measure an element's incremental value or damage
- A great way to avoid design argument
- Can use playtest results to drive other aspects of production



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## Playtesting as Production

- Solutions to playtest problems can be iterative
- Solve your problems in the right order
- Don't overcorrect
- Don't oscillate
- Finish successful elements before moving on



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## Product-level Benefits

- Allows you to schedule to a particular quality metric
- Scopes game design risk for key features
- Allows you to optimize toward your most successful elements
- Allows you to measure risk, speed, cost





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## Game Design Experiments

➤ Use them in your games!



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## Engineering Customer Experience

- What's most important to our customers?
- Is our marketing effective at reaching our customers?
- What are the worst problems plaguing our customers?
- What perf and memory budgets do we need to meet?
- Steam



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## Steam

- Building online games
- Building features for the customer
  - Auto updates
  - Anti-cheat
  - Communications – e.g., Friends
- Building features for your business
  - Product encryption/anti-piracy
  - Direct sales
  - Measurement

## Target Platform Experiments

➤ [www.steampowered.com/status/survey.html](http://www.steampowered.com/status/survey.html)

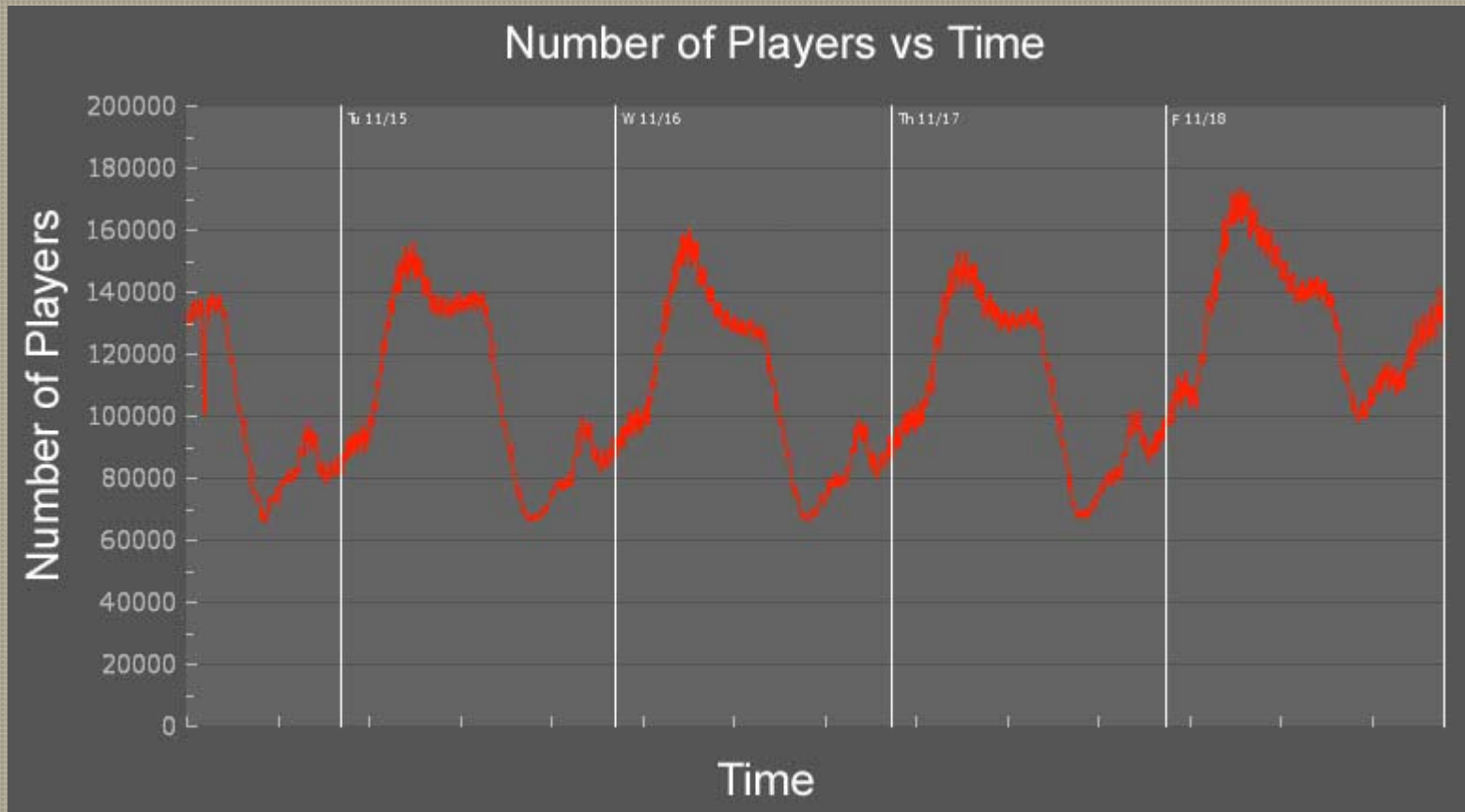
### Video Card Description

ATI Radeon 9600 Series	79,818	9.55 %	
ATI Radeon 9800 Series	78,006	9.33 %	
NVidia GeForce FX 5200 Series	66,756	7.98 %	
NVidia GeForce4 MX Series	53,963	6.45 %	
NVIDIA GeForce 6600	45,801	5.48 %	
ATI Radeon 9200 Series	42,291	5.06 %	
NVidia GeForce4 Series	40,443	4.84 %	
NVidia GeForce2 MX Series	27,297	3.26 %	
NVidia GeForce 6800 GT	22,743	2.72 %	
NVidia GeForce FX 5600 Series	20,511	2.45 %	



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## Product Success Experiments







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## Other Experiments

- Number of Steam sales/pre-orders
- Number of registrations (online and retail)
- Number of crashes



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## Conclusions

- Use the experimental approach today!
- Use playtesting to drive game production
- Steam is one tool that can help