

Guerrilla PrototypingA Design Post-Mortem of



Tyler Sigman

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HOARD™ is an interesting design story

- □ From boardgame to digital game
- Pursuit of an elusive idea
- Multiple prototype methods
- □ Iteration, iteration, iteration!



Takeaways

- □Prototyping techniques
- □Ideas for iterating on core idea...kill those darlings
- ■MS Excel tricks
- Designing robust, modular, flexible game systems while you are still figuring out how the game works

Disclaimers*

- □The ideas and views expressed are mine only and do not necessarily reflect those of
 - Dragons-at-large
 - Big Sandwich Games
 - Z2Live

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*These disclaimers may or may not apply. Consult legal counsel as necessary.



My Selected Credits





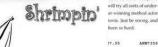
Night of the III

A Tyler Sigman Game

Each year, movie studios spend untold millions of dollars trying to seek out the best combination of actor, special effects, and plot that will result in financial windfall and Oscar success. Alas, no more are the days of the penniless director lighting plastic models on fire and dressing in a gorilla suit as part of a personal quest to create something truly terrible.

Now you can relive that romantic bygone era in Night of the III-Tempered Squirrel!

Ignore the critics. Ignore precedence. Ignore reason. Make the movie your heart uced, Unfortunately, the



Dump that day job and put on your hip waders. You're going into the Shrimpin' business. In Shrimpin' each player has scraped up just enough cash to purchase themselves a brand spankin' new used shrimp boat. Unfortunately, not much money is left, and

ar-winning method actor sovie. Just be strong, and 17.95















anyone stand in the way. Shrimpin' ble cards and the world famous rically significant original used in the

Big Sandwich Games

Est. 2006

















- □A game about dragons and their treasure.
- □PC, Mac, PS3, PSP
- "Stratecade" (strategy arcade)
- □1-4 Players
- □Co-op and competitive
- □35+ maps (at launch)
- □4 game modes
- □100+ badges/achievements

Top 5 Best-Selling Pub Fund Titles of 2011

- 1. Hoard (Big Sandwich Games)
- 2. Tales From Space: About a Blob (DrinkBox)
- 3. Joe Danger (Hello Games)
- 4. Eufloria (Omni Systems Limited)
- 5. Explodemon! (Curve Studios)

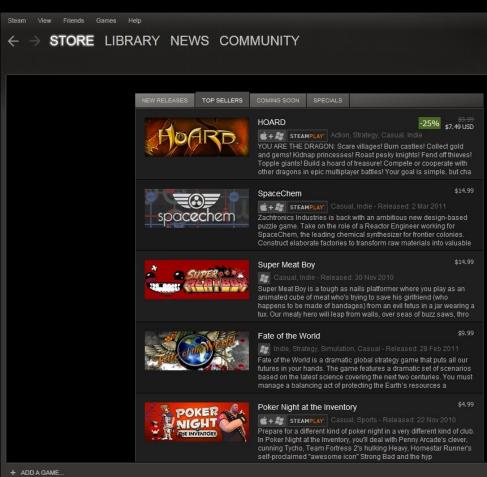
Critical Reception (PS3)

- □IGN Best of 2010
 - Winner: "Best Quick Fix"
 - Nominated: "Best Competitive Multiplayer"
- "Burninating the countryside is definitely a lot of fun" (IGN)
- "HOARD's gameplay shines" (Joystiq)
- "Will keep you scorching villages for hours on end." (ArsTechnica)
- "Hides a surprising layer of complexity and strategy" (1UP)
- □Curse you, Official PlayStation Magazine UK, curse you.



HOARD™ Trailer

DESIGN WHAT WENT RIGHT





What Went Right:

#1: SOLID CONCEPT

Dragon Game: Origins

- □Ideas are a dime a dozen, but...
- □Good ones aren't
- □Who doesn't want to be the dragon?
 - □ Esp., dragon as HERO
- □Bottom line: I've been trying to make a dragon game for a long time!
- □"How long?", you ask?

HOARD Timeline

- •2002: Boardgame 1...failure
- •2003: Boardgame 2...not a failure, but not a success
- Oct 2009: GameMaker prototype
- •Dec 2009: Sony Pub Fund committee pitch, greenlight
- •Jan 2010: Development begins
- March 2010: Pub Fund final contract signed
- •Nov 2010: PS3 Release (North America)
- •(April 2011): Steam Release
- •(Aug-Nov 2011): DLC Releases 1, 2



What Went Right:

#2: PROTOTYPING FTW!

HINT: MOST OF THE TALK IS ABOUT THIS

Benefits of Prototyping

- □Failed fast
- □Designed fast
- □Playtested fast



Fast doesn't mean "not methodical"

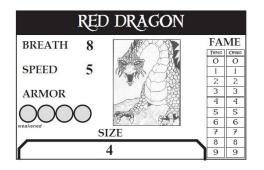
Prototyping HOARD

Three main phases:

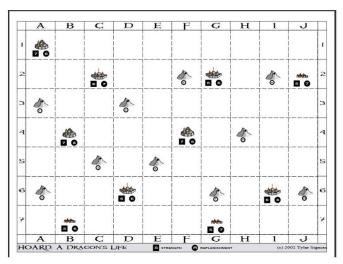
- Boardgames (analog protos)
- 2. Gamemaker (low fi 2D digital proto)
- 3. In-engine proto work

Boardgame Prototype #1

hoarð ~ prototype 1 (2002)



woon Ph	woon Eb	Stone Ph	Stone Eb	Stann Ph	Stano Ph	Stana Ph	Cloon Ph	Troop Sh	Atono Ph
4,000 gp	4,000 gp	4,000 gp	5,000 gp	10,000 gp	10,000 gp				
maiden	maiden								
maiden	maiden								
maiden	maiden								
maiden	maiden	maiden	maiden	maiden	maiden	Emerald	Emerald	Emerald	Emerald



Boardgame #1: Mechanics

- "Each player takes the part of an ambitious dragon striving to amass the most impressive hoard of treasure, fair maidens, and fame in all the land."
- □Key elements:
 - Upgradeable dragons
 - Trade caravans/wagons
 - Villages
 - Fair maidens and knights
 - Fame
 - Modular board
 - ...TREASURE!

Boardgame #1

QUICK REFERENCE CARD

TURN ORDER

- Players alternate performing dragon action turns
- 2. Draw knights and adventurers
- 3. Check for new caravans and maidens
- 4. Roll for village treasure REPLENISHMENT
- Begin the next round

DRAGON ACTIONS

MOVE—RAZE—TERRORIZE—RAID—KIDNAP—STASH—STEAL—DUEL—HEAL

FAME AWARDS (+1 Pt unless noted)

- Successfully RAZE a village
- Successfully RAID a caravan
- STASH maiden(s)
- STASH treasure
- Defeat a knight or adventurer
- ❖ Win a DUEL (+2 FAME)
- Avoid a knight or adventurer (-1 FAME)

Maiden Replenishment

B. /	- 1	1		Com	ieboar	-1
IV.	12411	100	CILI	Charlette	enoar	"

0	1	2	3	4+	_
+2	+1	+1	+0	+0	-
+2	+2	+1	+1	+0	
+3	+2	+2	+1	+1	
+3	+3	+2	+1	+1	
	0 +2 +2 +3	0 1 +2 +1 +2 +2 +3 +2	0 1 2 +2 +1 +1 +2 +2 +1 +3 +2 +2	0 1 2 3 +2 +1 +1 +0 +2 +2 +1 +1 +3 +2 +2 +1	0 1 2 3 4+ +2 +1 +1 +0 +0 +2 +2 +1 +1 +0 +3 +2 +2 +1 +1

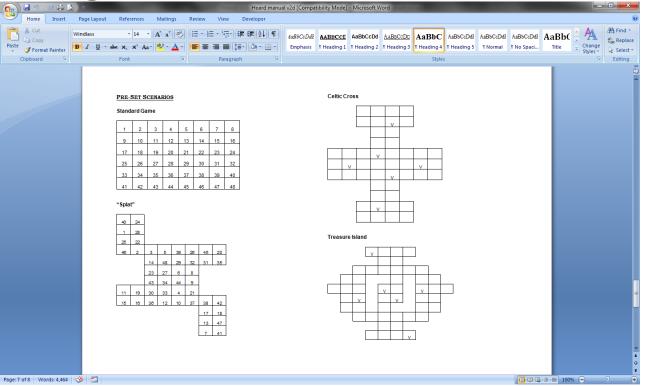
Terrorizing Villages

ROLL RESULT

- 1-8 The villagers are mildly frightened.
- 9 Rawr! Take one random treasure from the village.
- 10 RAWR! Take one treasure of your choice from the village.

Regardless of roll result: +1 to Attack that village on next turn.

Boardgame #1: Modular Boards



Photographic Evidence!



Boardgame #1 – Design Successes

- ■You are the dragon!
- Concept of dragons, hoards, razing villages, attacking caravans
- Upgradeable dragons
- Modular boards/different layouts

Boardgame #1 – Design Failures

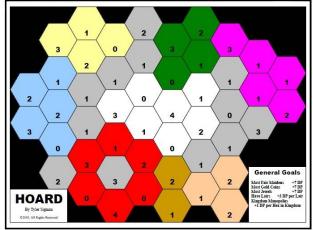
- "Not Fun" –the ultimate failure of any design
 Why?
 - Core mechanics were too bland:
 - •Movement, attacking: "Ameritrash elements"
 - Too much upkeep in replenishment mechanics
 - Too procedural: process of locating hoards and seeding cities resulted in too much or too little balance

If at first you don't succeed...



Boardgame Prototype #2

hoarð ~ prototype 2 (2003)





HOARD: LAND TILES

Resources

tesource								_	
-2	-2	-2	-2	-2	-1	-1	-1	-1	-1
-1	-1	+1	+1	+1	+1	+1	+2	+2	+2
+2	+2	+2	+3	+3	+3	+3			

Maidens, Jewels, and Coins

| Fair
Maiden |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Jewels . | Jewels | | |
| Coins | | |

Knights, Lairs, Etc.

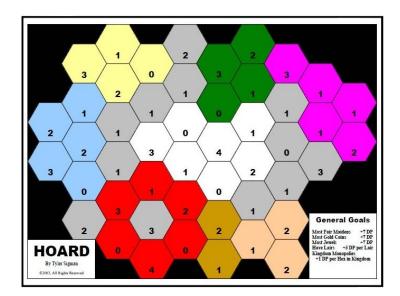
Knight	Knight	Knight	Lair (+3)	Lair (+3)	Lair (+3)	Lair (+3)	
Barbarian Horde	Barbarian Horde	Barbarian Horde	Adventurer	Adventurer	Adventurer	Adventurer	Adventure

Boardgame #2: Mechanics

□Abstract mechanics involving territory control

Try to gather groups of like territories to earn

bonuses



Pics or It Didn't Happen!



Boardgame #2 – Design Successes

- Core mechanics were solid
 - Interesting challenge/combat mechanism
 - Goal cards well integrated into strategy
- □Tight design, potential for polishing into a good game

Boardgame #2 – Design Failures

- "Not Dragon Enough"
 - Too abstract
 - Didn't make full use of the central concept
- □How did the dragon get lost?
 - I got distracted by trying to make a game with really solid mechanics, regardless of theme
 - HOARD is a game that relies on theme as much as mechanic

Time Passes...

- What happened to the boardgames?
 - #1: not fun enough
 - #2: not dragon enough



- BSG looking for new things to pitch after our involvement in the Sky Pirates project ended*
- □Personal downtime at work led to prototyping time
- □HOARD is rejuvenated!



^{*}This subject comprises a few GDC talks in itself...some of which require adult beverages.

GameMaker Prototype (2009)



GameMaker Proto



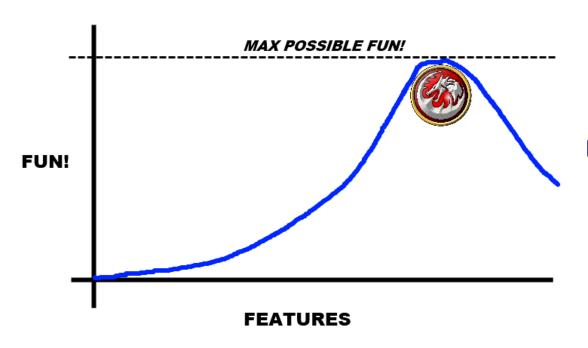
Gamemaker Proto •PROTOTYPE LIVE DEMO ZOMG!



Gamemaker Prototype: Design Successes

- □All core HOARD systems
- □Successfully blended Arcade and RTS
- □Non-linear fun curve

Non-Linear Fun Curve



Fun was achieved when all the key interrelated mechanics were in place (farms, towns, wagons, knights, princesses, thieves)

The Upshot

□ FUN!

- Team enjoyed playing it, seeking it out repeatedly
- Your team's **behavior** is honest...not their words)

Gamemaker Prototype: Design Failures

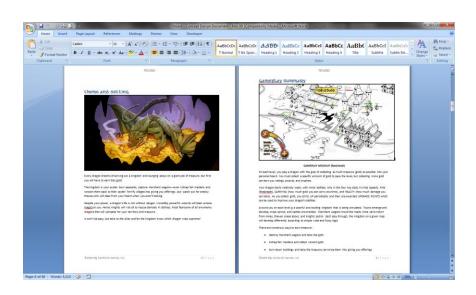
•None!

- It's not that the prototype didn't have problems
- It successfully demonstrated what it needed to do
- "Sometimes things work out."

Some features didn't work—but these helped iterate on the core ideas early

Sony Pub Fund Pitch (2009)

- □Showed the GameMaker proto
- Greenlight!



Prototypes and Publishers: Double-Edged Sword

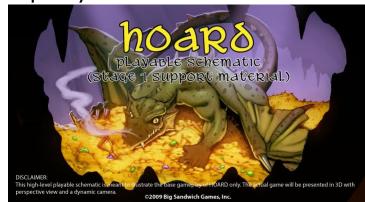
- □Great for showing a rough idea
- ■Beware!
 - Many evaluators can't look at proto art and see through to a final product. They will judge the proto art.

□Advice:

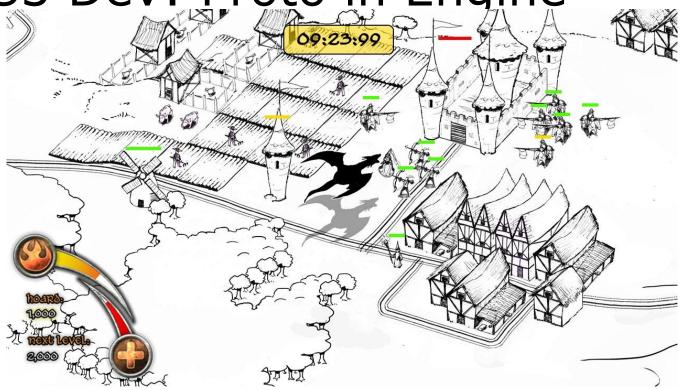
- Use heavy disclaimers
- Make sure the other party knows how to evaluate a proto before you

send

50/50



PS3 Dev: Proto in Engine



PS3 Dev: Proto in Engine















Final PS3!



Final PS3!



PC/Mac: Night Mode



PC/Mac: Desert DLC





What Went Right:

#3: CREATIVE USE OF AVAILABLE TOOLS

Entrepreneurship

Use Whatcha Got

- □Gamemaker for 2D proto
- □MS Excel as level editor
 - No time to make a level editor
 - Familiarity with Excel and VBA scripting



When you are a



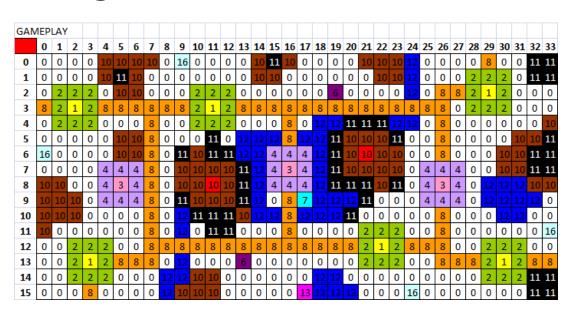
Everything looks like a



HOARD - Level Design

□The best level design tool of all-time!

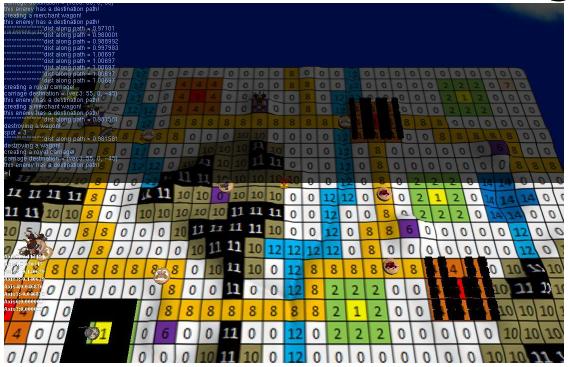
MS EXCEL!



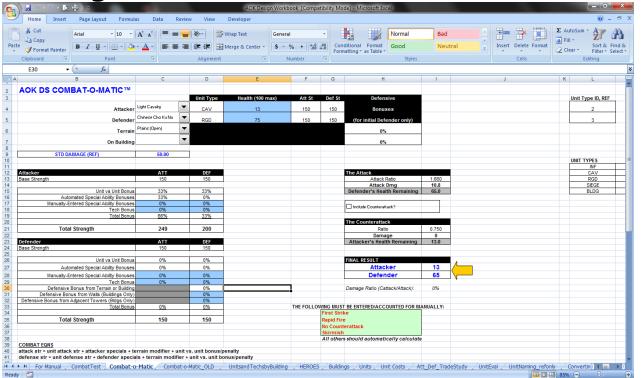
HOARD: Excel Level Editing

Terrain Types for MAP DESIGN						
				Booleans		
Terrain ID	Color Index	Name	Description	walkable	flyable	wagons
0	0	Open	no special gameplay properties	TRUE	TRUE	FALSE
1	6	MillSpot	mills can spawn here	TRUE	TRUE	FALSE
2	43	Crops	crops can spawn here	TRUE	TRUE	FALSE
3	38	TCSpot	TCs can spawn here	TRUE	TRUE	TRUE
4	39	Houses	City buildings can spawn here	TRUE	TRUE	TRUE
5	10	MineSpot	Mines can spawn here	TRUE	TRUE	TRUE
6	13	CastleSpot	Castles can spawn here	TRUE	TRUE	FALSE
7	8	Arcane	Wizard's towers can spawn here	TRUE	TRUE	FALSE
8	45	Road	road-bound units can travel on this	TRUE	TRUE	TRUE
9	55	InnSpot	coaching inns can spawn here	TRUE	TRUE	TRUE
10	53	Hills	impassable to wagons	TRUE	TRUE	FALSE
11	1	Mountains	impassable to all but flying units	FALSE	FALSE	FALSE
12		Water	impassable to all but flying units	FALSE	TRUE	FALSE
13	7	Powerup	spawns powerups	TRUE	TRUE	FALSE
14	3	HOARDspot	hoard spot [NO LONGER USED!]	TRUE	TRUE	FALSE
15	47	BlankTable	nothing/no terrain	TRUE	TRUE	FALSE
16	34	Giant	Giant spawn / exit spot	TRUE	TRUE	FALSE

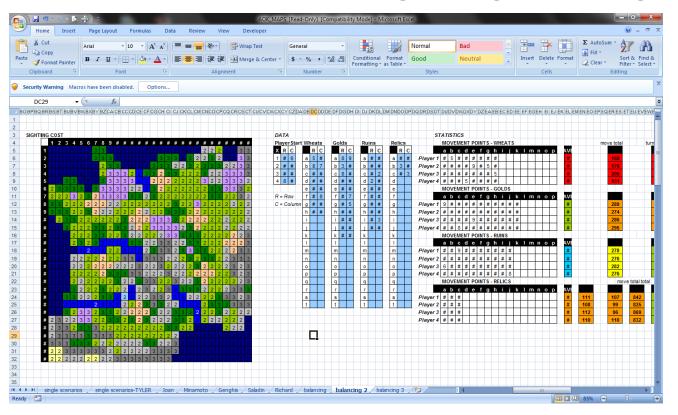
HOARD: Excel Level Editing



Excel Tricks vol II: Age of Kings DS Combat-o-Matic™



Excel Tricks Vol III: Balancing in Age of Kings DS





What Went Right:

#4: MODULAR PARAMETRIC DESIGN

AKA "DEFENSIVE/OFFENSIVE DESIGN"

- □**Modular**: HOARD's core systems were made up of individual self-contained parts with interfaces
- - Flexible development (add/cut)
 - Easy tweaking
 - Emergent gameplay and strategies
 - A design that is greater than sum of its parts

- □**Parametric**: Many settings were expressed in terms of ratios/multipliers of other settings.
- □Goal is to reduce # of independent dials
- Benefits of **parametric** approach:
 - Easier tuning on a large scale
 - Promotes a design thought process focused on relationships, not discrete values

Core System 1: The Kingdom Economy



HOARD Economy

•Crops→Farm Carts→Towns→Wagons











•Castles→Princess Carts→Towns









Castles→Knights





◆Towns→Archers, Thieves







HOARD Economy

□Commerce is tracked!

Trade leads to town growth

□Economy leads to strategy

- "Bonsai tree" approach
- Special town buildings (markets, taverns)



Core System 2: Princesses and Knights

- 1. Destroy royal carriage to reveal a princess
- Pick up princess and take to hoard to begin Ransom Timer
- 3. When Ransom Timer expires, princess turns into \$\$
- 4. Knights try to rescue captured princesses





Princesses and Knights



Princesses and Knights

□Ties together:

- Wagons
- Castles
- Cities
- Knights
- (dragons)





- □Risk/reward (castle size, fighting knights)
- □Key branch to the main treasure collection strategy tree (carrying vs wizard gems)

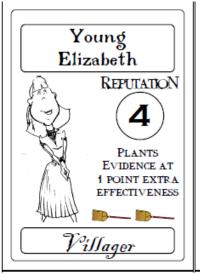
Emergent Strategies

- Design philosophy: complexity via simplicity
 - Combination of many simple interrelated mechanics leads to complex macro systems
 - But without sacrificing overall simplicity

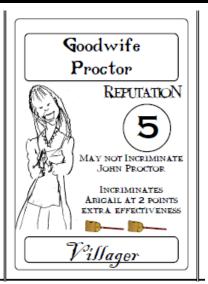
□Thief example: pro-tip

- Step 1: Obtain score multiplier
- Step 2: Let thief start stealing
 - Step 3: Kill thief before finished
 - Step 4: Pick up gold and return to hoard









What Went Right:

#5: APPEAL TO A DIVERSE AUDIENCE

□What Casual Players love in HOARD:

- Short play times
- Co-op modes
- Theme
- Simple core mechanics onboarding to deeper mechanics
- □What Hardcore gamers love in HOARD:
 - Fast-paced action/strategy blend
 - Intense multiplayer competition
 (IGN nominated Best Competitive Multiplayer...right beside COD: Black Ops)
 - Score competition driving advanced strategies

Bonus #6: Nimble Dev Structure

- Clear decision making hierarchy for design
 - In other words, I was the tyrant
 - Most of the games I've seen fail are games with heavy design-by-committee structure
- □Small and nimble team
 - Minimum documentation, maximal discussion
 - Two Stories:
 - The Fireball Powerup story
 - Co-Op Mode story

DESIGN WHAT WENT WRONG



#1: Not Enough Polish

- □Many parts lacked sizzle
- □5-10% of the little things are missing...and those make a huge difference
 - Camera cuts and transitions
 - GUI sophistication / usability
 - Multiplayer lobby features and stat tracking

#2: Too Much Content

- □Given no story mode, we tried to pack value into the \$14.99 launch price
 - 35+ maps
 - Lots of modes
 - 100+ achievements
- □A paradox:
 - More than necessary...
 - Yet not enough of the best parts, which takes us to What Went Wrong #3:

#3: What Audience is this for?

- □HOARD appealed well to both core and casual
 □BUT:
 - Not enough core features to support core players
 not enough competitive multiplayer stat tracking
 - Not enough casual content to support casual players long-term
 - •needed more than 6 co-op maps

#4: Not Enough Character

- □The Dragon is the center of the game...the HERO

 □Missed a big chance to have player identify with his
- Missed a big chance to have player identify with his dragon
- □Scope considerations, but still not a valid excuse □Ideas for repair:
 - □ Design a central dragon avatar(s) and use throughout
 - ■More prominent in FE, game results
 - □Players choose dragon avatar, shows on profile
 - □ Story mode / linked missions



SELECTED TOPICS

A Fundamental Rule of Game Design

- ■More Iterations = Better Game
- □How to maximize iterations:
 - 1. Prototyping (paper, low-fi)
 - 2. Design for tuneability (tunability)
 - 3. Efficient technology / streamlined pipeline
 - 4. Scheduling / project structure (extended pre-pro)
 - 5. Team structure (hierarchy, decision-making)
 - 6. Creative and financial control (Blizzard, BioWare)

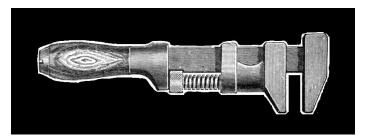
Sid Meier School of Design

□Best way to get iterations:

- Banish yourself to a corner
- Acquire expertise with some prototyping tool(s)
- Get to work
- Beat people away with a stick (unless you need something from them)
- Playtest and iterate!







1 Sentence Explanation

- "You are a dragon, collect as much treasure as you can in 10 minutes!"
- □Similar to movie loglines
- □Conciseness is <u>critical</u> for:
 - □ Communicating your game concept
 - □ Steering the game DESIGN
 - □Game razor

Featured Mechanic: Score Multiplier

- Something was missing
- Needed a differentiator for skill that can result in larger score variance
- Score Multiplier was the answer



Score Multiplier: How it Works

- Score multiplier increases over time
 - After 30 seconds: x2
 - After 60 seconds: x3
- All treasure returned to hoard is multiplied
- •LOSE it if:
 - Dragon death
 - Thief steals from hoard
 - Other dragon steals from hoard



Score Multiplier: Enhanced Gameplay

- Larger score variance (Greater skill differentiator)
- More directed strategies and choices
- Heightened risk/reward
- Wider competitive options



Score Multiplier – Design Choices

- Max score multiplier
 - Tried out x4 and x2, but settled on x3
- •Time interval for score multiplier increase
 - 30 second intervals was first try, and final shipping config

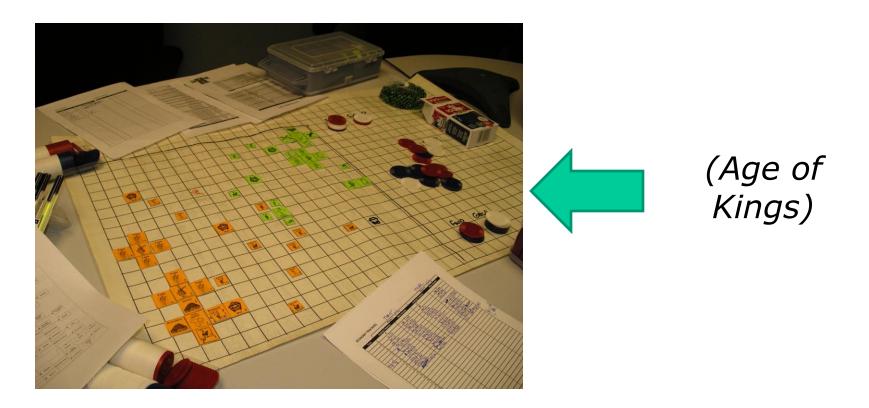
Featured Mechanic: Dragon "Death"

- •Permissive option:
 - Knock score multiplier down 1 level
 - Fly back to hoard at 2x speed
- Punishing option
 - Reset score multiplier to x1
 - Fly back to hoard at 0.5x speed
- •Final config:
 - Reset score multiplier to x1
 - Fly back to hoard at 1.0 speed

The Message: Guerilla Prototyping

- □Game development is a WAR, and there are no Geneva Conventions
- If you don't have the resources to fight in trenches, fight in the jungles
- □Use the tools you have available
- □No excuses...only good and bad games

Remember: Paper Prototyping is A.O.K.



Time Expire!

- □Fill out the Session Review (pretty please!)
- □Contact:
 - □ tyler.sigman@gmail.com
 - □ @tylersigman
 - □ Email me for a HOARD code!

