

DEPTH IN SIMPLICITY: THE MAKING OF JETPACK JOYRIDE

Luke Muscat

Chief Creative Officer
Halfbrick Studios

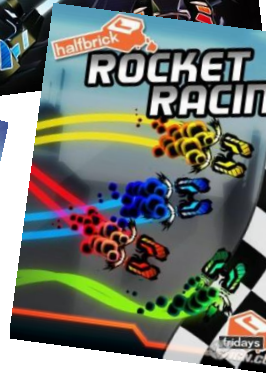
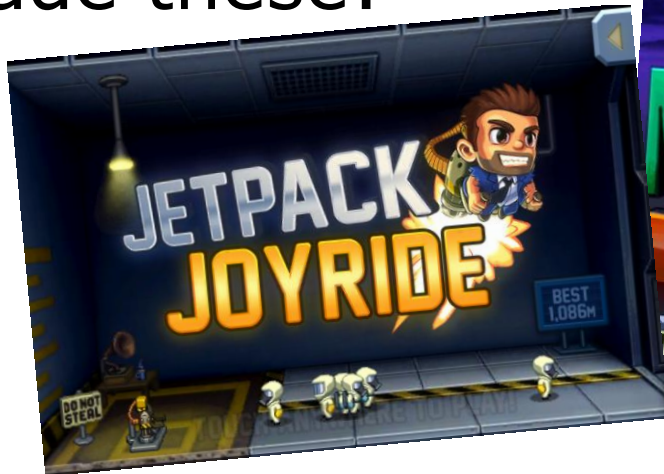
GAME DEVELOPERS CONFERENCE

SAN FRANCISCO, CA
MARCH 5-9, 2012
EXPO DATES: MARCH 7-9

2012

INTRODUCTIONS!

- Luke Muscat
- CCO @ Halfbrick
- Made these:



WHAT THE HELL IS THIS ABOUT?

- Like a post mortem... kind of
- Lots of crazy random design points about Jetpack Joyride
- More than I can fit into an hour!



CHAPTER #1: A GAME IN 4 WEEKS

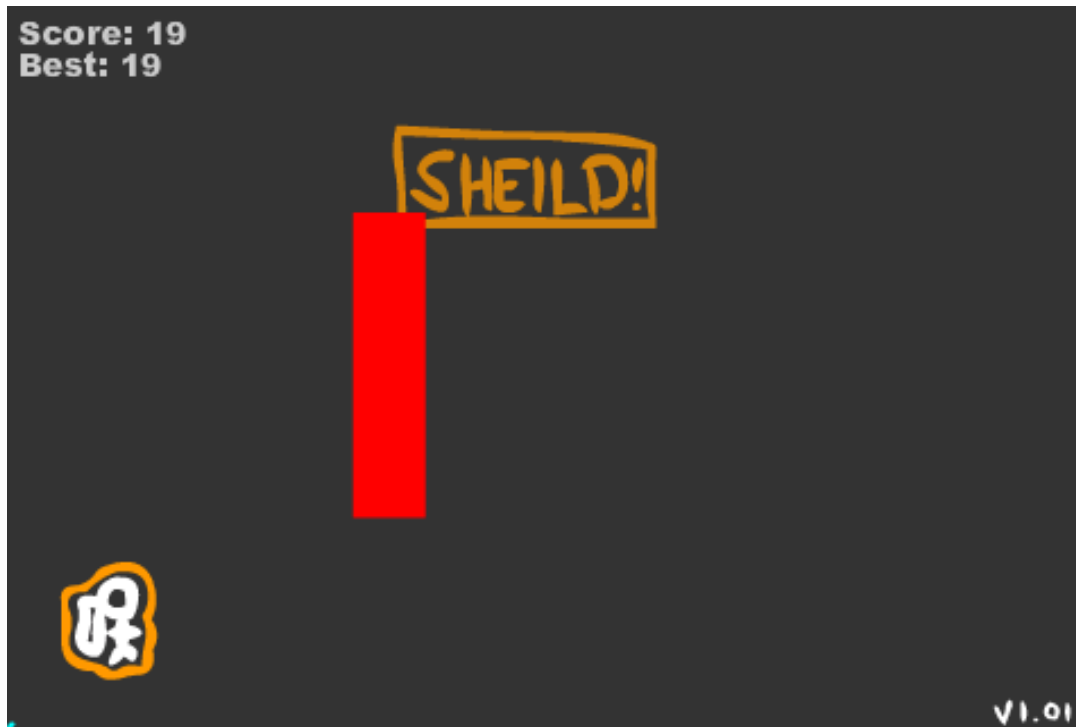
4 WEEK GAME?



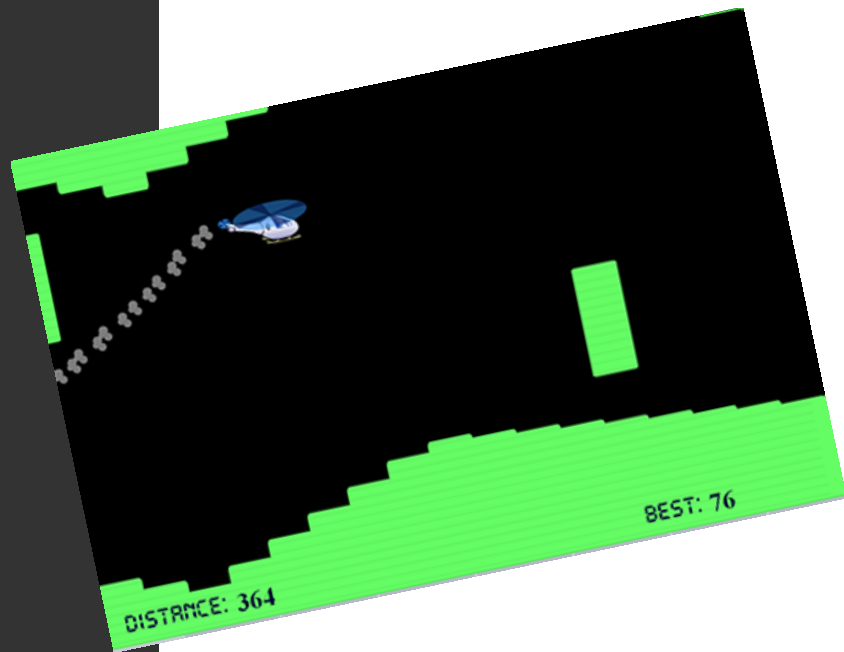
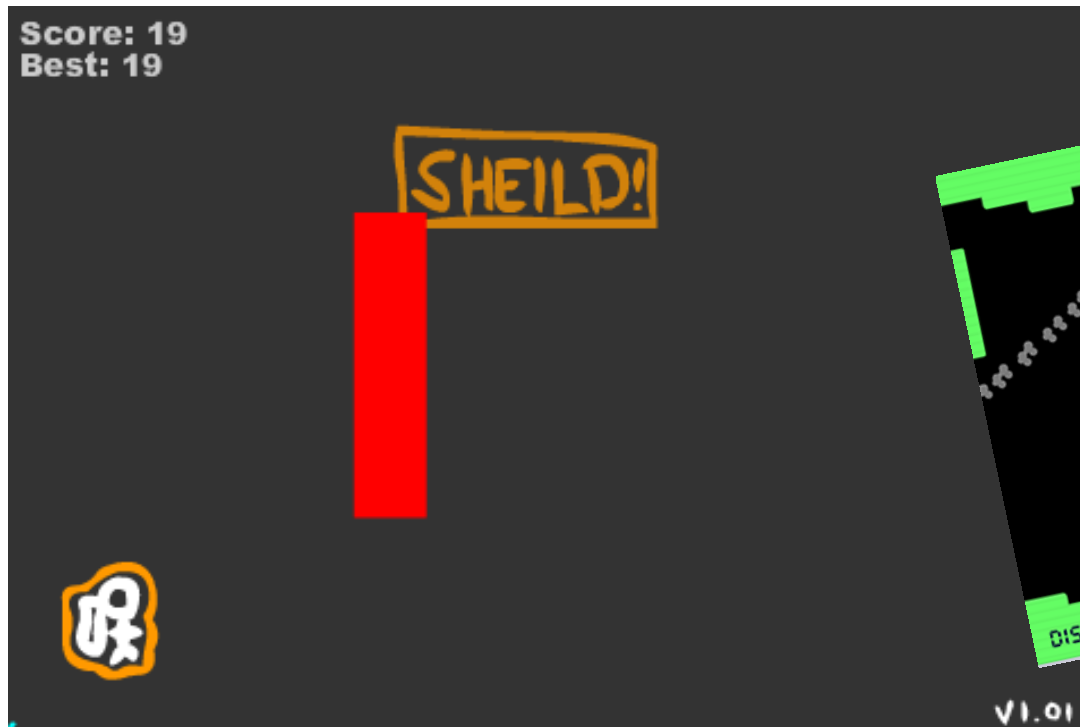
GOALS / PILLARS

- 1 Button
- Super accessible
- Ad break play
- Depth for the hardcore's

THE PROTOTYPE



THE PROTOTYPE



CHAPTER #2: IT BEGINS

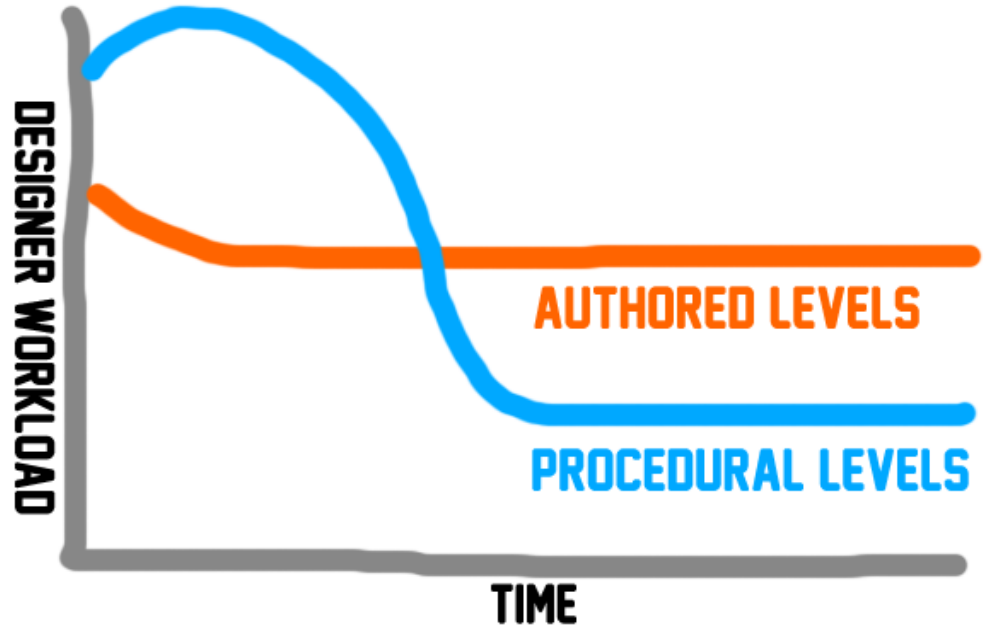
PREFACE: JSI / RSO





PROCEDURAL LEVEL GENERATION

- <3 Levels
- Only designer on 2 projects = time poor



TYPES OF ENTITIES

- Zappers
- Coins
- Lasers
- Missiles
- Tokens
- Vehicles
- Rotating Zappers
- Coin Streaks
- Missile Streaks

INTERVAL SYSTEM

- Everything is placed by the interval system.
- Every entity type has a probability of occupying next slot.

INTERVAL SYSTEM

REGULAR INTERVAL



INTERVAL SYSTEM

TOTALLY RANDOM INTERVAL

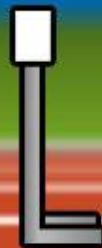
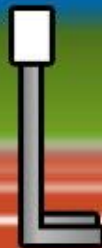


INTERVAL SYSTEM

MIN / MAX INTERVAL


MINIMUM INTERVAL LENGTH


MAXIMUM INTERVAL LENGTH



MIN INTERVALS = UNFAIR



MIN INTERVALS = UNFAIR



UNFAIR GAME IS UNFAIR



COSTS OF FAILURE

- Time lost
- Feeling of failure
- Friction on starting again (retry loop)

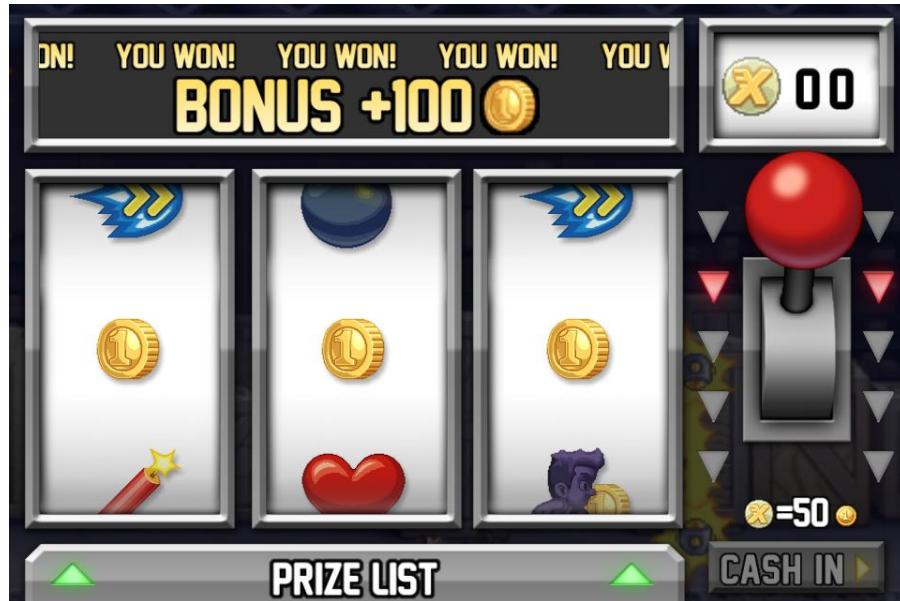
TIME LOST



EMOTIONAL COST



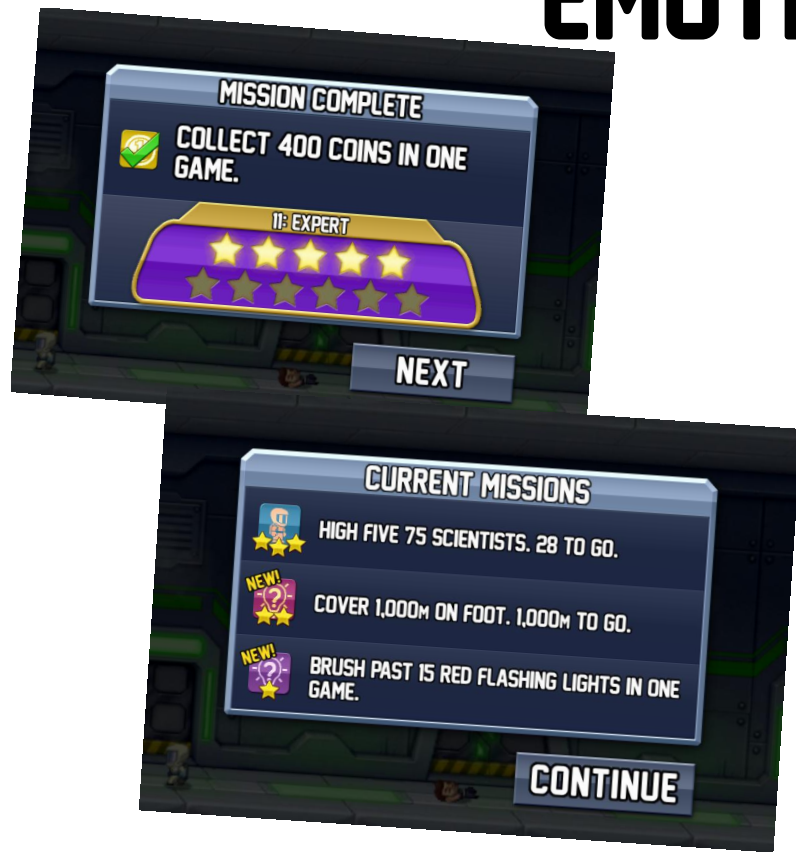
EMOTIONAL COST



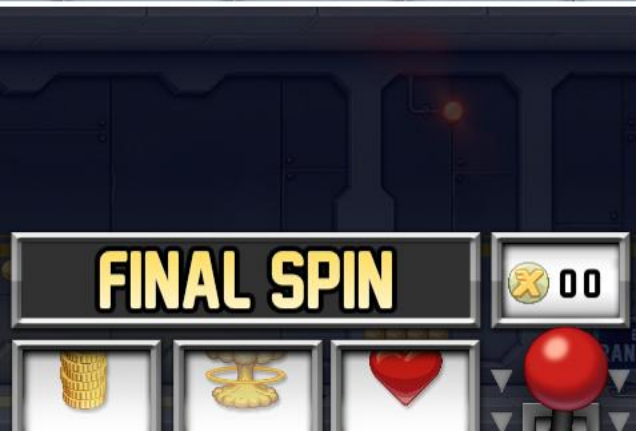
EMOTIONAL COST



EMOTIONAL COST



RESTART FRICTION



CHAPTER 3: TESTING TIME

CHRISTMAS 2010



CHRISTMAS 2010



PLAYTESTING NINJA STYLES

MACHINE GUN JETPACK

UPDATE #1

CODENAME: PROFITABLE STABILITY

- ★ ADDED PROFIT BIRD GRAPHICS AND SOUNDS!!!
- ★ ADDED ART+SFX FOR BUBBLE AND STEAM JETPACKS!
- ★ FIXED FONT + SHOP ISSUES ON IPAD
- ★ TWEAKED DIFFICULTY PAST THE 2000M MARK (INSTEAD OF GOING FASTER THE OBSTACLES GET CLOSER TOGETHER)
- ★ ADDED CATEGORIES AND PROGRESS TO 'MY STUFF'
- ★ NEW PROTOTYPE! CONSUMEABLE ITEMS!!! (FINAL PLAST

MACHINE GUN JETPACK

FINAL BETA!

WE HAVE JUST 2 WEEKS LEFT! THIS IS YOUR LAST CHANCE
TO BETA IT UP AND REQUEST CHANGES!

CHANGE LIST:

NEW ITEM: HEAD START
SKIP THE FIRST 750M!



HOLY H02X, BATMAN!
SUPER SEXY FILTERS ON
IPHONE 4 AND IPAD!



NEW RESULTS SCREEN!

FEATURING:
★ SAVEABLE ACTION SCREENSHOTS!
★ MISSIONS SLIDER



7 AWESOME
NEW SHOP ITEMS!

PLAYTESTING NINJA STYLES

MACHINE GUN

JETPACK

UP
CODENAME

- ★ ADDED PROFIT BIRD GR
- ★ ADDED ART+SFX FOR B
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- ★ TWEAKED DIFFICULTY P
- OF GOING FASTER THE OBSTAC

★ ADDED CATEGORIES AND PROGRESS TO 'MY STUFF'

★ NEW PROTOTYPE/ CONSUMABLE ITEMS!!! (FINAL PLAST



MACHINE GUN

BETA!

THIS IS YOUR LAST CHANCE
REQUEST CHANGES!



7 H02X, BATMAN!
ER SEXY FILTERS ON
ONE 4 AND IPAD!



NEW RESULTS SCREEN!

FEATURING:
★ SAVEABLE ACTION SCREENSHOTS!
★ MISSIONS SLIDER

7 AWESOME
NEW SHOP ITEMS!

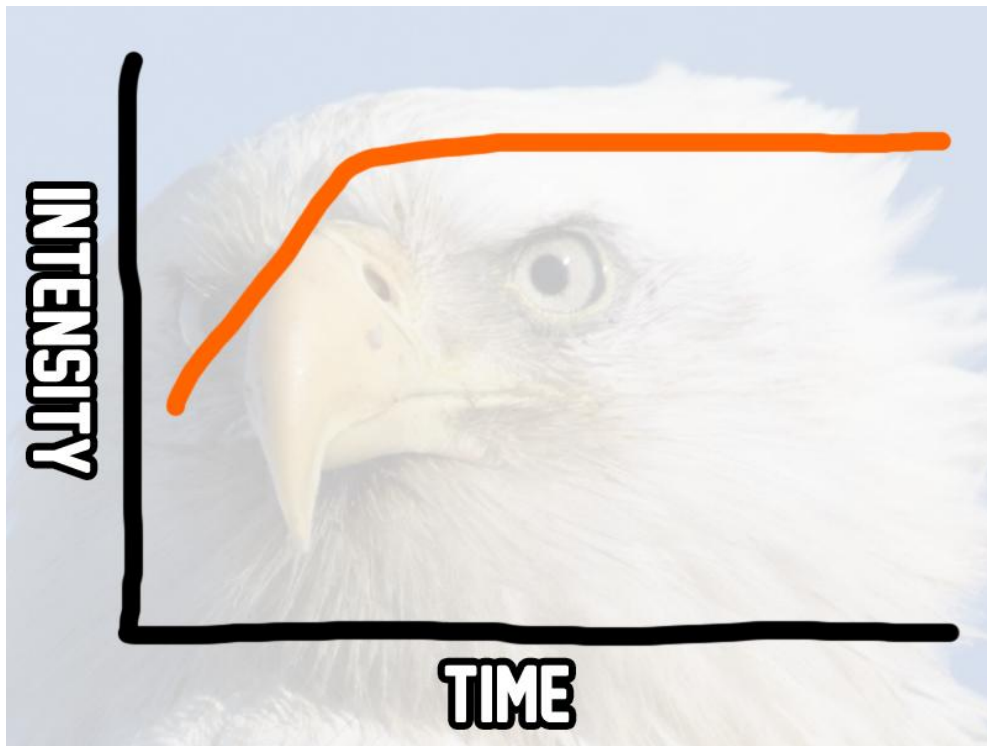
REVELATIONS

- Became obvious that this game needs more time.
- Releasing a free, half assed game seems like the wrong move after Fruit Ninja.

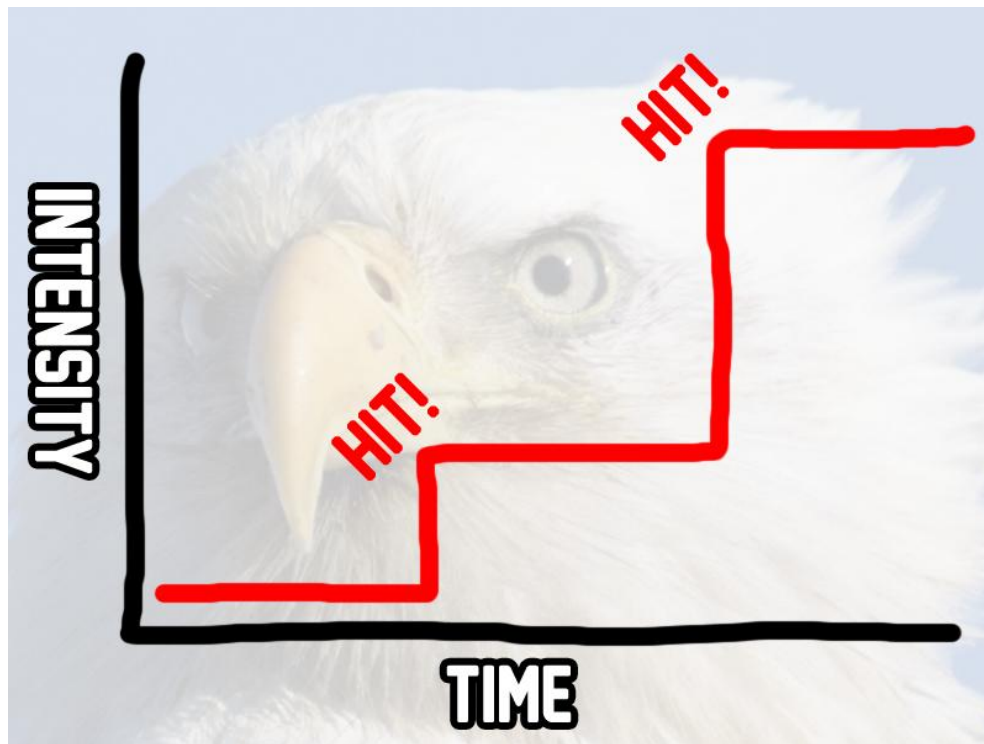
2 PROBLEMS...

- Feels hard, and super intense... No low points in the pacing, always one step away from death.
- Not enough variety. Players burning out fast.

PROBLEM 1: INTENSITY



3 HEARTS INTENSITY



COD STYLE INTENSITY



PROBLEM 2: VARIETY

How do we add more variety?

PROBLEM 2: VARIETY



PROBLEM 2: VARIETY

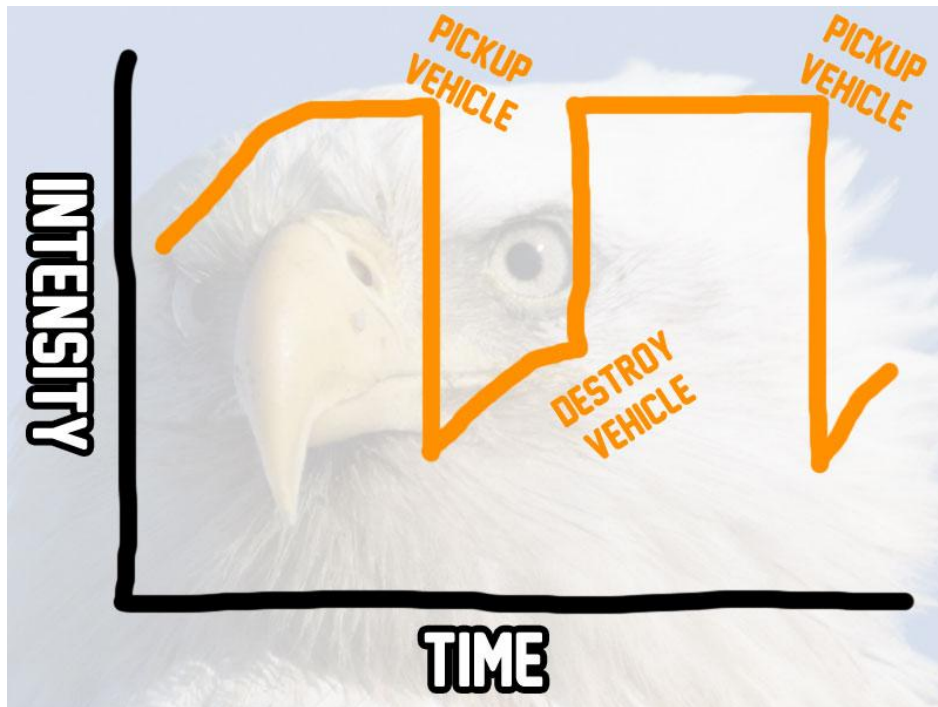
What if we change the controls...?

People HATE it when you do that...

NEW CONTROLS



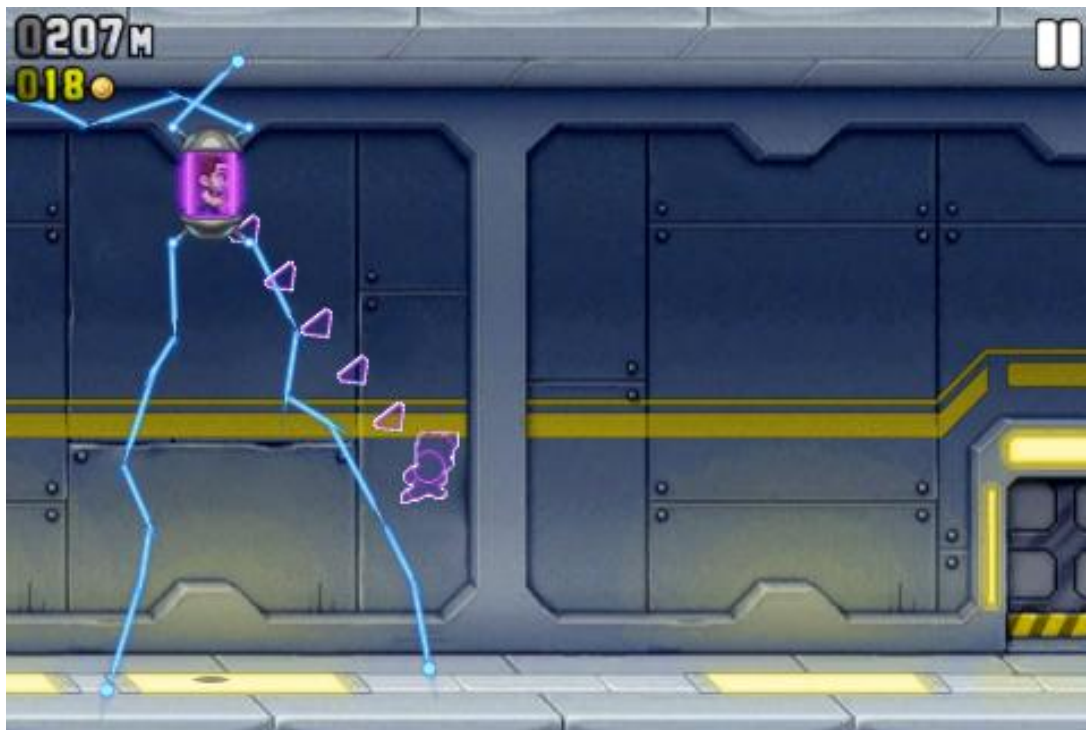
NEW PACING STRUCTURE



GREAT SUCCESS

- Pacing = better
- Variety = better
- More explosions = more better
- Game had a big injection of character
- Player's quickly developed favourites

HOW DUMB CAN WE BE?



EASING IN AND OUT

- First big play test = last years GDC!
- People would often make critical mistakes in close proximity to control changes.

EASING IN AND OUT



EASING IN AND OUT



HOW MANY?



CHAPTER 4: STICKYNESS

FOUNDATION FOR EXPERIMENTATION



NEW GOALS / EXPERIMENTS

- Make an ultra sticky game
- Try out some IAP / economy type stuff
- Learn stuff that we don't know much about!

THE SHOP!

- Provide incentive for the player other than 'beat my friends'
- Allow players to express themselves!

COSTUME SHOP!

WALLET: \$320



TOP HAT
\$200

\$BUY!

BACK

HEADWEAR	
✓ TOUPE	\$10
✓ PIMP HAT	\$30
STACK HAT	\$30
BALD CUT	\$100
TOP HAT	\$200
✓ PUNK	\$1000
JET PACKS	
FIGHT JET PACK	\$100
✓ SHARK PACK	\$2000
STEAM POWERED PACK	\$3000

COSTUME SHOP!

WALLET: \$320

TOP HAT
\$200

\$BUY!

BACK

HEADWEAR

✓ TOUPE \$10

✓ PIMP HAT \$10

STACK HAT

BALD CUT

TOP HAT

✓ PUNK

JET PACKS

FIGHT JET PACK

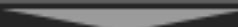
✓ SHARK PACK



STEAM POWERED PACK



UPGRADES APPAREL **PREMIUM** SPECIAL JETPACKS UPGRADES

	COUNTERFEIT MACHINE	
	COIN BOOSTER PACK: 10,000 COINS!	
	COIN BOLSTER PACK: 30,000 COINS!	
	COIN MEGA PACK: 100,000 COINS!	
	COIN BILL GATES PACK: 1,000,000 COINS!	



	THIS OFF THE SHELF COUNTERFEIT MACHINE WILL ALLOW BARRY TO DOUBLE THE AMOUNT OF COINS HE EARNS PER LEVEL. ILLEGAL, YET NIFTY!	
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NOT SO GENERAL STORE



exit



premium



upgrades



jetpacks



fashion



other

tap to select a category!

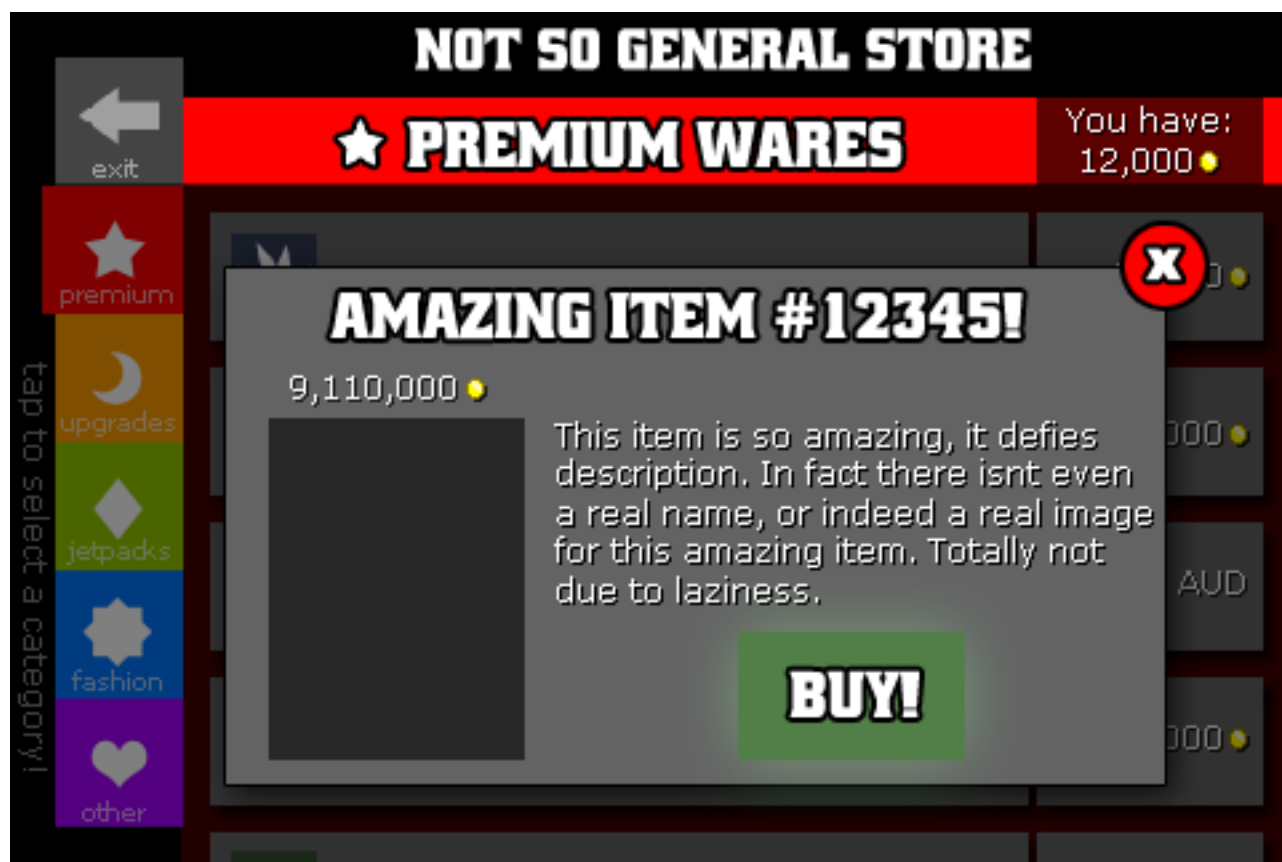
★ PREMIUM WARES

	SHARK POWERED JETPACK!	12,000 ●
	STANDARD ITEM #12345	9,110,000 ●
	PREMIUM ITEM #12345	\$99.99 AUD

Every time Barry finishes a run, the amount of coins he has earnt gets doubled! Highly illegal. Super awesome.







BUY!

You have:
12,000 ●



TIME TO STEAL...



BACK	FOR SALE	MY GEAR	YOU HAVE 42,000 ●
CLOTHES	<div></div> <div>LAB COAT INCLUDES CLASSY POCKET PROTECTOR.</div>	42,000 ● >	
	<div></div> <div>SHARK POWERED JETPACK HEAVY. POWERFUL. CRAZYNES.</div>	2,000 ● >	
JETPACKS	<div></div> <div>TOP HAT USELESS MAYBE. CLASSY DEFINITELY.</div>	4,900 ● >	
	<div></div> <div>SLIPPERY CLOTHES SLIDE FURTHER AT THE END OF YOUR RUN.</div>	2,225 ● >	
UPGRADES	<div></div> <div>RUBBER BONES BOUNCE FURTHER WHEN UNCONSCIOUS.</div>	100,000 ● >	
	<div></div> <div>DISPOSABLE BONUS THINGY GOOD FOR ONE USE. CAN BE REPURCHASED.</div>	19,500 ● >	
PREMIUM			

BACK

FOR SALE

MY STUFF

YOU HAVE 42000 🟡

LAB COAT

LOVED BY THE LADIES. INCLUDES CLASSY POCKET PROTECTOR.

42000 ● ➤

SHARK POWERED JETPACK

YOU READ CORRECTLY. FASTER HEAVIER AND CRAZIER.

42000 ● ➤

DISPOSABLE ITEM 3 PACK

USED IN THE FINAL SPIN FOR SOME EXTRA SPINS WHEN YOU NEED IT.

42000 ● ➤

SLIPPERY CLOTHES

SLIDE FURTHER WHILE UNCONSCIOUS FOR A FEW EXTRA METERS.

42000 ● ➤

RUBBER BONES

BOUNCE FURTHER, COULD MAKE THE ALL THE DIFFERENCE.

42000 ● ➤

7F GONGI ES

CLOTHING

JETPACKS

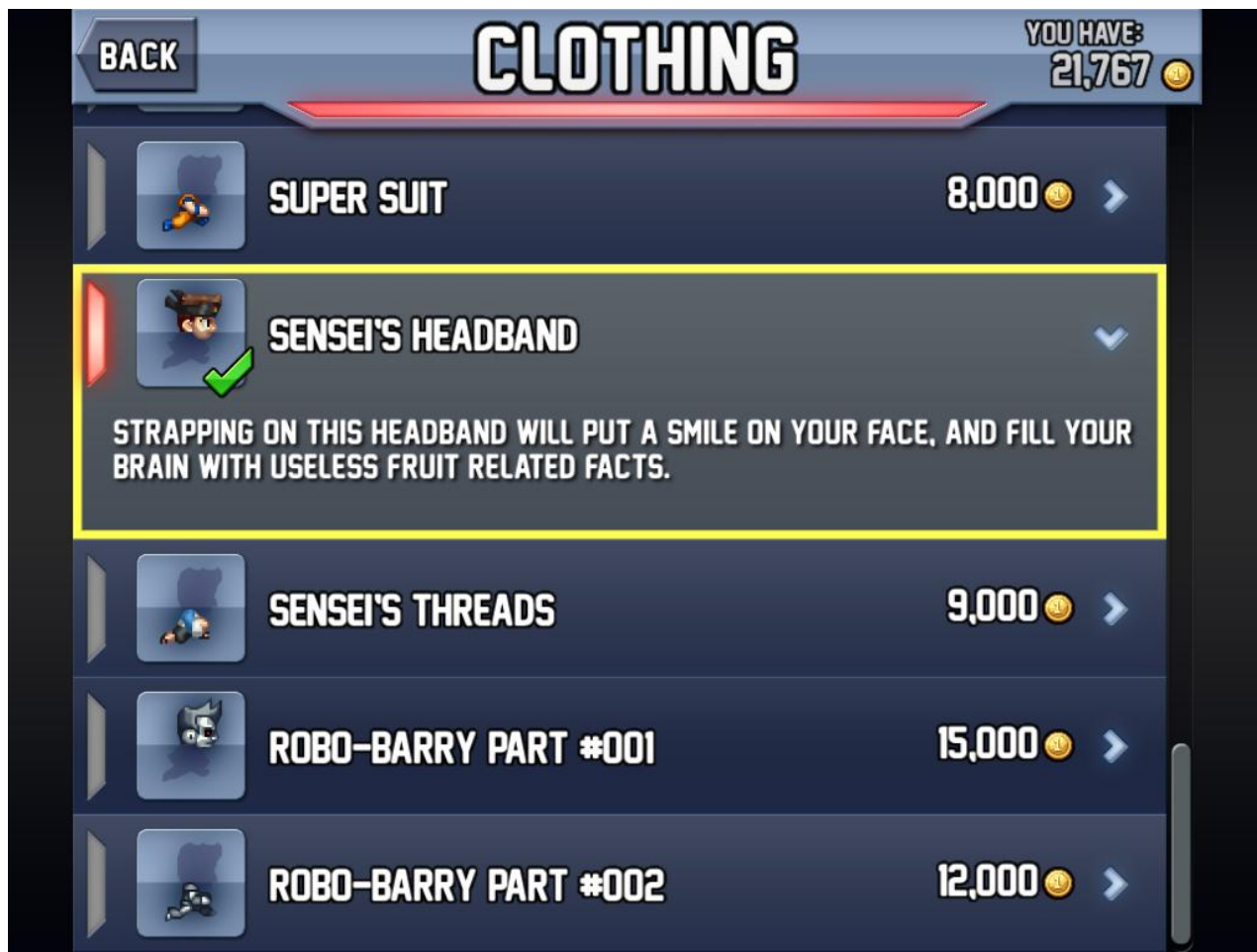
UTILITIES

OTHER STUFF

PREMIUM

GET FREE COINS





CHAPTER 5: WE ARE ON A MISSION

THE MISSION SYSTEM

- Inspired by Tiny Wings
- Wanted to do more, with full reward structures and avoiding some of the pitfalls such as getting stuck and burning out
- Will take roughly 1 week... right?

3 COMPANY TESTS

- Daily
- Optional
- Progressive

DAILY SYSTEM



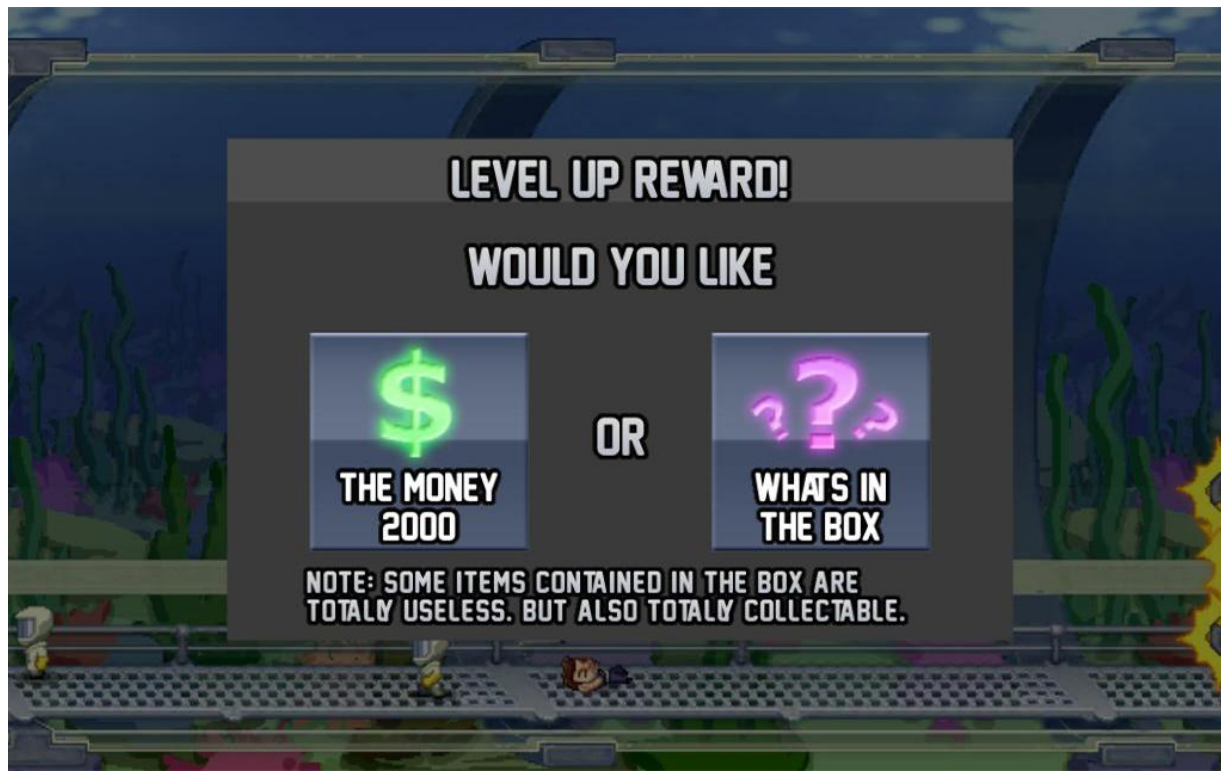
OPTIONAL SYSTEM



PROGRESSIVE SYSTEM



REWARDS



GETTING VISCERAL

- Bars filling up were nice, but we really wanted to give some punchy visceral feedback for completing missions.
- Stars slam into place, with sparks, dust etc.

THE STARS



SURPRISE MEGA FEATURE

- Becomes a massive draw to the game.
- So many layers of goals! (social, status, personal, intrinsic, extrinsic...)

PRESTIGE

CALL OF DUTY 4 PRESTIGE MEDAL ICONS



BACK MY PROFILE YOU HAVE 1,650,749

1891: BEGINNER

★ ★ ★

#61	#97	#41	#106	#107	#79
#122	#86	#47	#18	#119	#33

BACK MY PROFILE YOU HAVE 1,650,749

#50	#108	#63	#64	#62	#23
#39	#5	#93	#94	#112	#55
#7	#52	#38	#24	#102	#92

BACK MY PROFILE YOU HAVE 1,650,749

#57	#59	#34	#36	#121	#53
#43	#68	#58	#10	#87	#14
#122	#86	#47	#18	#119	#33

BACK MY PROFILE YOU HAVE 1,650,749

#120	#40	#96	#77	#66	#111
#11	#78	#115	#9	#117	#99
#29	#45	#35	#125	#16	#113

BACK MY PROFILE YOU HAVE 1,650,749

#83	#81	#56	#15	#76	#72
#49	#1	#114	#84	#123	#12
#3	#60	#90	#101	#70	#32

BACK MY PROFILE YOU HAVE 1,650,749

#44	#6	#88	#28	#105	#19
#21	#46	#91	#65	#71	#2
#118	#20	#31	#13	#30	#54

BACK MY PROFILE YOU HAVE 1,650,749

#22	#110	#48	#27	#82	#100
#67	#73	#69	#104	#80	#124
#103	#17	#42	#26	#4	#109

BACK MY PROFILE YOU HAVE 1,650,749

#37	#8	#51	#95	#74	#85
#98	#25	#75	#116	#89	#21

PERSONAL BESTS

BEST SCORE	6,631 M
MOST COINS COLLECTED	6,464 COINS
MOST TOKENS COLLECTED	9 TOKENS

FRUIT NINJA VS. JETPACK

- Smaller audience(?), much much higher engagement.

CHAPTER 6: GETTING THAT BASTARD OUT THE DOOR

PERFORMANCE RANGE



MACHINE GUN JETPACK

DO NOT
STEAL

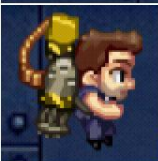
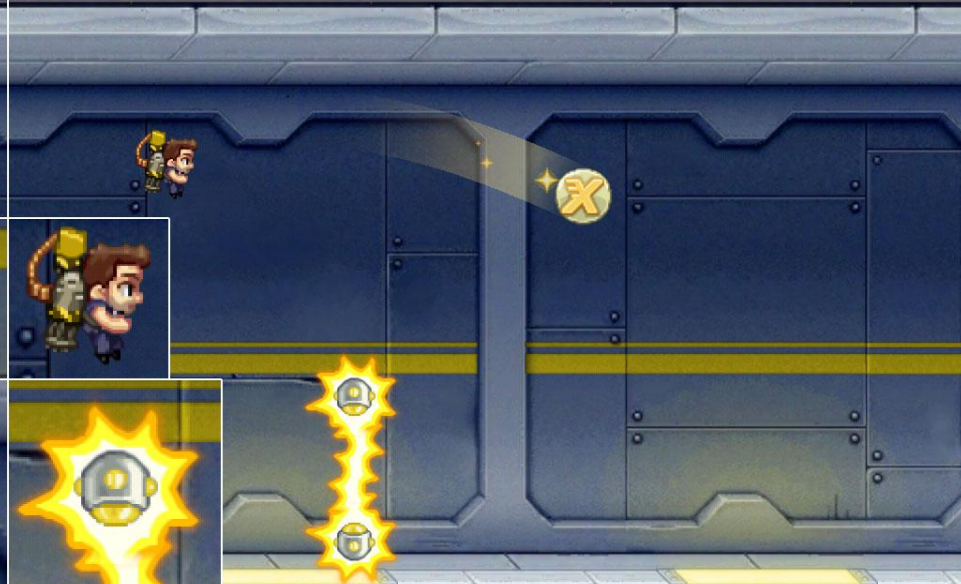
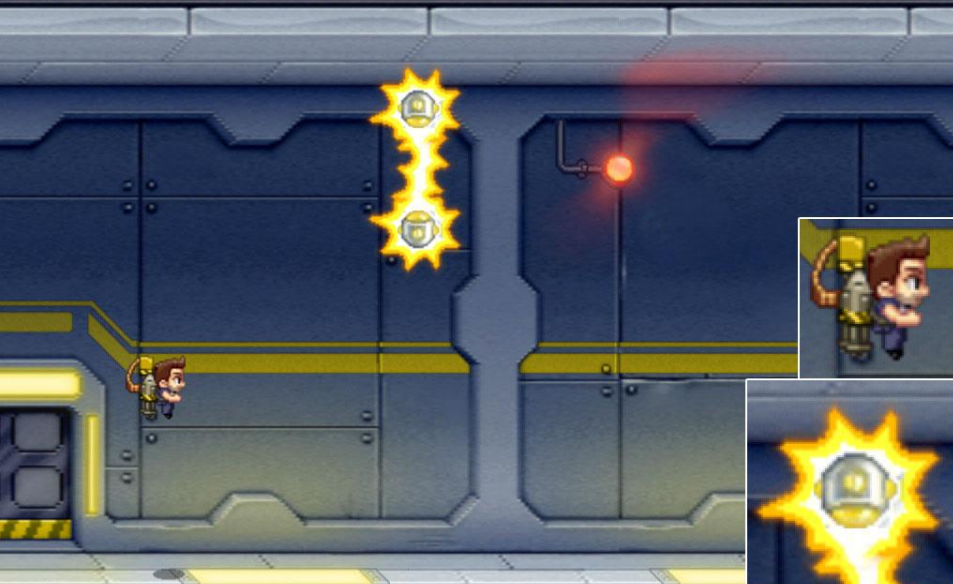
TOUCH ANYWHERE TO PLAY

0131M
v7618M



MACHINE GUN JETPACK

0251M
v211M



OH ALSO...



FINALLY OUT!!!

- Massive critical reception
- Instant chart success, thanks to cross promotional efforts and media storm
- Worth the extra 1200% effort
- Could not be happier!



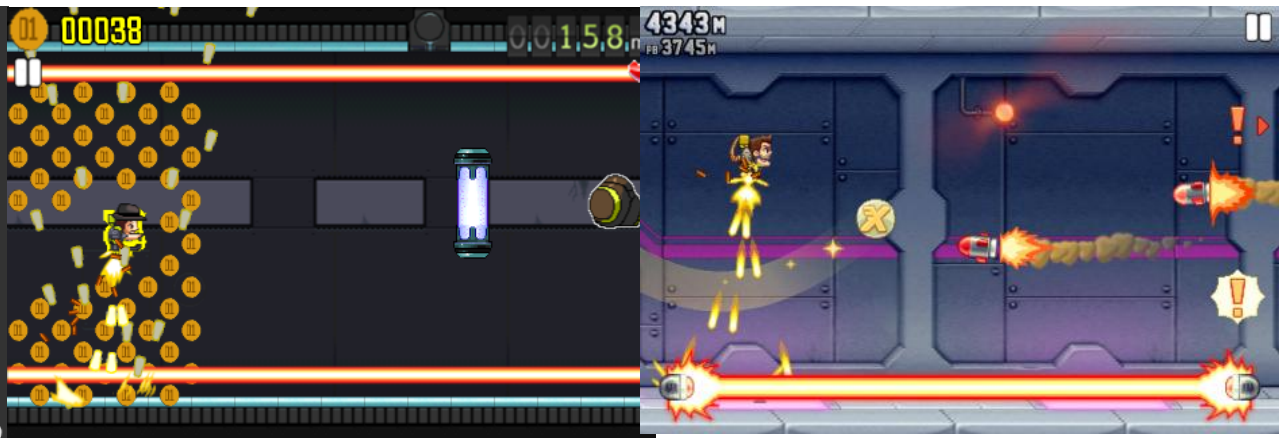
THANKS!

Score: 19
Best: 19

SHEILD!



V1.01



LMUSCAT@HALFBRICK.COM

I KNEW SOMEONE WOULD ASK THIS:

