



Rocket League: The Road From Cult Classic to Surprise Success

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Design Director, Psyonix

INTRODUCTION

- About me
- What's a Psyonix?
 - Independent San Diego, CA studio
 - Known for Unreal Engine outsourcing



OUTLINE

➤ Development History

- Key Decisions
- Unintuitive Insights
- Analyzing Success
- Post-Release Lessons



SUPERSONIC ACROBATIC ROCKET-POWERED BATTLE-CARS!

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Supersonic Acrobatic Rocket-Powered Battle-Cars

PlayStation 3

[Psyonix](#) | Release Date: Oct 9, 2008

Summary

Critic Reviews

User Reviews

Details



GAME

67

Metascore
Mixed or average reviews
based on [16 Critics](#)
[What's this?](#)

Summary: Get ready for non-stop action as you take control of a rocket-powered super car! It is a sport like no other, where supersonic cars jump, flip, and rocket boost their way to victory. [Sony]

Awards & Rankings



#92 Best PS3 Game of 2008



#42 Most Discussed PS3 Game of 2008



#18 Most Shared PS3 Game of 2008

SUPERSONIC ACROBATIC ROCKET-POWERED BATTLE-CARS

- People who “got it” LOVED it
 - Cult following still playing into 2015
 - Endless community montages and YouTube clips
- We felt like it could have gone differently
 - We love this game, others do too – but few heard about it
 - Could better marketing and polish make it successful?
 - Game that released on PS3 wasn't the same game we played on PC on LAN!

BATTLE-CARS 2

- Envisioned as a higher quality, more realistic sequel
 - Spent a LOT of time concepting and experimenting with scale
 - Struggled to move perception away from “RC Cars”
- Too much change at once!
 - Modifying scale, physics model, car design, etc.
 - Never hit on a fun, playtestable build

BATTLE-CARS 2

- Built pitch reel for publishers in 2011
 - Exciting new prospects with major publishers funding alternative games – EA Partners, etc.
 - Nobody was interested!
- Shelved due to other studio priorities
- Ahead of its time?



The background of the slide is a screenshot from the game 'Battle-Cars World'. It shows a first-person perspective of a car driving on a snowy, mountainous terrain. In the distance, there are snow-capped mountains and a small structure with a digital display showing '0-0' and '5:00'. The sky is a deep blue with some clouds. The overall scene is dimly lit, suggesting dusk or dawn.

BATTLE-CARS WORLD

- An open-world driving prototype using our cars
 - Full of mini-games and races
 - Drive to stadiums to queue up for matches
- Scope was out of control!
 - Split focus made it hard to make any one part good
 - Physics that make soccer fun aren't great for other activities

ROCKET LEAGUE

- The game we wanted SARBPC to be
- Small, dedicated side team
- Narrower focus than other “sequel” ideas
 - Car soccer on dedicated servers
 - Get to PC Alpha Build ASAP
 - Free-to-Play...Eventually

WHAT CHANGED?

- Major Feature Additions to SARBPC formula
 - Dedicated Servers
 - 60(ish) FPS
 - Massively improved Matchmaking
 - Uncertainty-based skill rating
 - Flexible preference system (3v3 OR 4v4, USEast OR Europe)
 - Expanded Car Customization
- Polish, Polish, Polish (and more polish)

WHAT CHANGED?

- Outsourcing Experience
 - Take what works from other studios... and avoid what doesn't!
 - Mastered Unreal 3 by assisting others
- Internal Development Process
 - ARC Squadron (iOS)
 - Cancelled/Failed Projects
 - Development is hard. We failed a lot. *Everyone does.*
 - Recurring Theme 1: Too many cooks!
 - Recurring Theme 2: Got lost iterating without clear vision

OUTLINE

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- Post-Release Lessons



KEEPING IT SIMPLE - STATS

McLaren

P1

2013

HYPERCARS



S2

998

RWD



Speed

0.4

elerat

9

ch

Brake

10



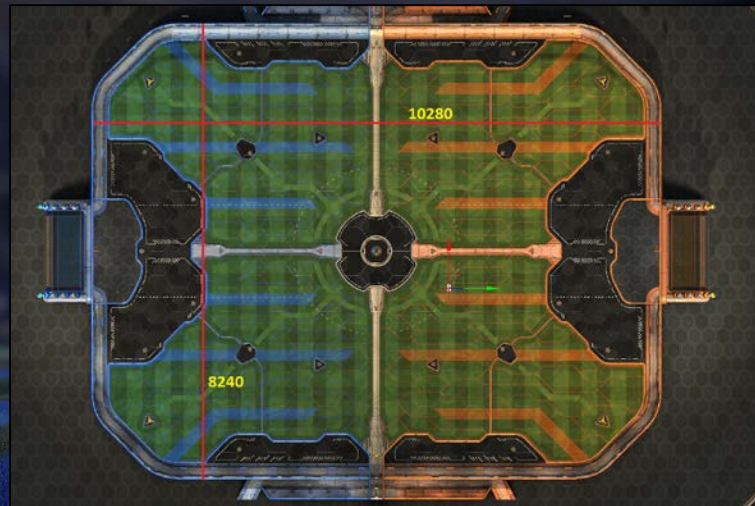
KEEPING IT SIMPLE - MODES



- Not confident players would accept “one mode” for \$20
- Scheduling concerns trumped disagreement
- Hard for secondary modes to measure up
 - We had years to perfect our “soccer” mode

KEEPING IT SIMPLE – ONE LAYOUT

- SARPBC had alternate layouts, but...
 - Players mostly played “Urban”
- Perfect the design vs. split focus
- Every angle, corner, and surface encourages fun moments
- This frustrated veterans who missed the variety!



GOING PREMIUM

- Started life as Free-to-Play
 - Makes sense for MP-centric game with an odd premise
 - Need a large playerbase for good skill matching
 - Valve makes it look easy!



GOING PREMIUM



62

Package

Tires, Rims, Skin

Fabricates tires, rims, or a skin.

Mold

Prime

Greater value for the smart mechanic. Fabricates Uncommon or Rare items.

VIEW ITEMS

FABRICATE ITEM

SALVAGE ITEM

FABRICATE

Sheet Metal



Available: 13
Required: 13

Sprocket



Available: 20
Required: 13

Fusion Core



Available: 138
Required: 2

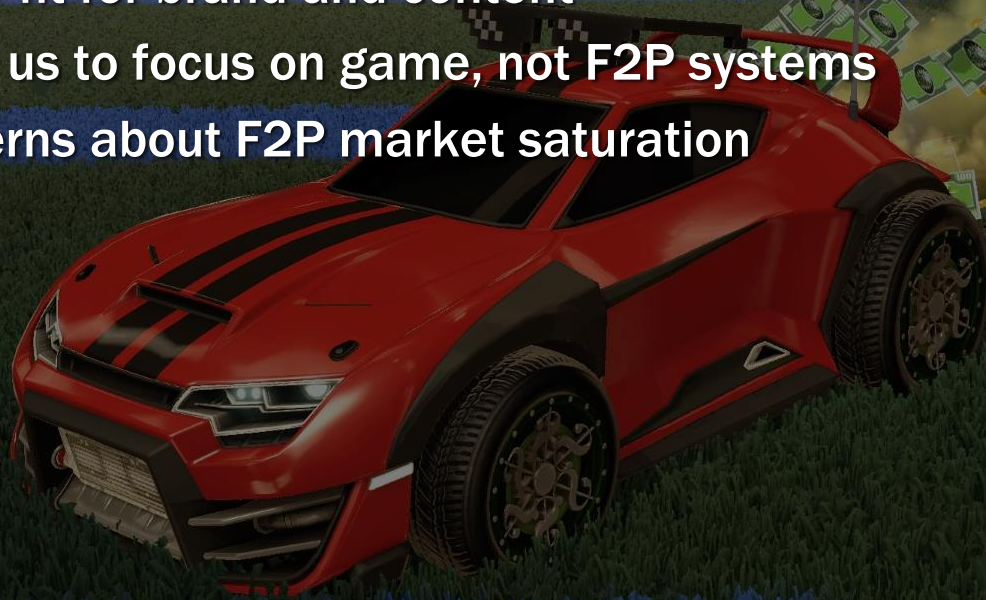
BACK

Backfire (140702.38637.87639)

Quick Match and Bots are now open 24 hours for a limited time!

GOING PREMIUM

- Refocused on Premium in Summer 2014
 - Better fit for brand and content
 - Freed us to focus on game, not F2P systems
 - Concerns about F2P market saturation



GOING PREMIUM

- Our projections actually favored premium!
 - ARPU on popular PC F2P between \$1-\$4
 - <https://www.superdataresearch.com/blog/mmo-arpu/>
 - Think we'll sell at least 50k units at \$20..
- Can we sell enough car hats?
 - (Probably not)





Rocket League Business & Marketing Plan



Estimated Production Costs	\$1 Million
Required Revenue for Profitability	\$1.8 Million
Minus Platform & Tech Fees	-\$666,000
Net Revenue	\$1.13 Million

Units to be Sold	56,725
OR	
F2P Transactions Needed	1.82 Million

*Based on Industry Avg. ARPU of \$1.71

REQUIRED FEATURES



 **Daddy**  **Cooper** **Ragnar** **INVITE PLAYERS**
17 **SEMI-PRO**

Download the official Rocket League Soundtrack at participating digital retailers

PLAY ONLINE

PLAYLISTS

- ☐ DUEL 1v1
- ☐ DOUBLES 2v2
- ☐ STANDARD 3v3
- ☐ CHAOS 4v4











RANKED

- ☐  SOLO DUEL 1v1
- ☐  DOUBLES 2v2
- ☐  SOLO STANDARD 3v3

REGION Any

LAUNCH PLATFORMS

- Planned on PS4 + PS3
- Steam would come “later”
 - Prioritized at last minute over PS3
 - Concerned about controller!
- Best decision we ever made!
 - Expanded playerbase dramatically
 - Covered costs quickly
 - (Valve pays MUCH quicker!)

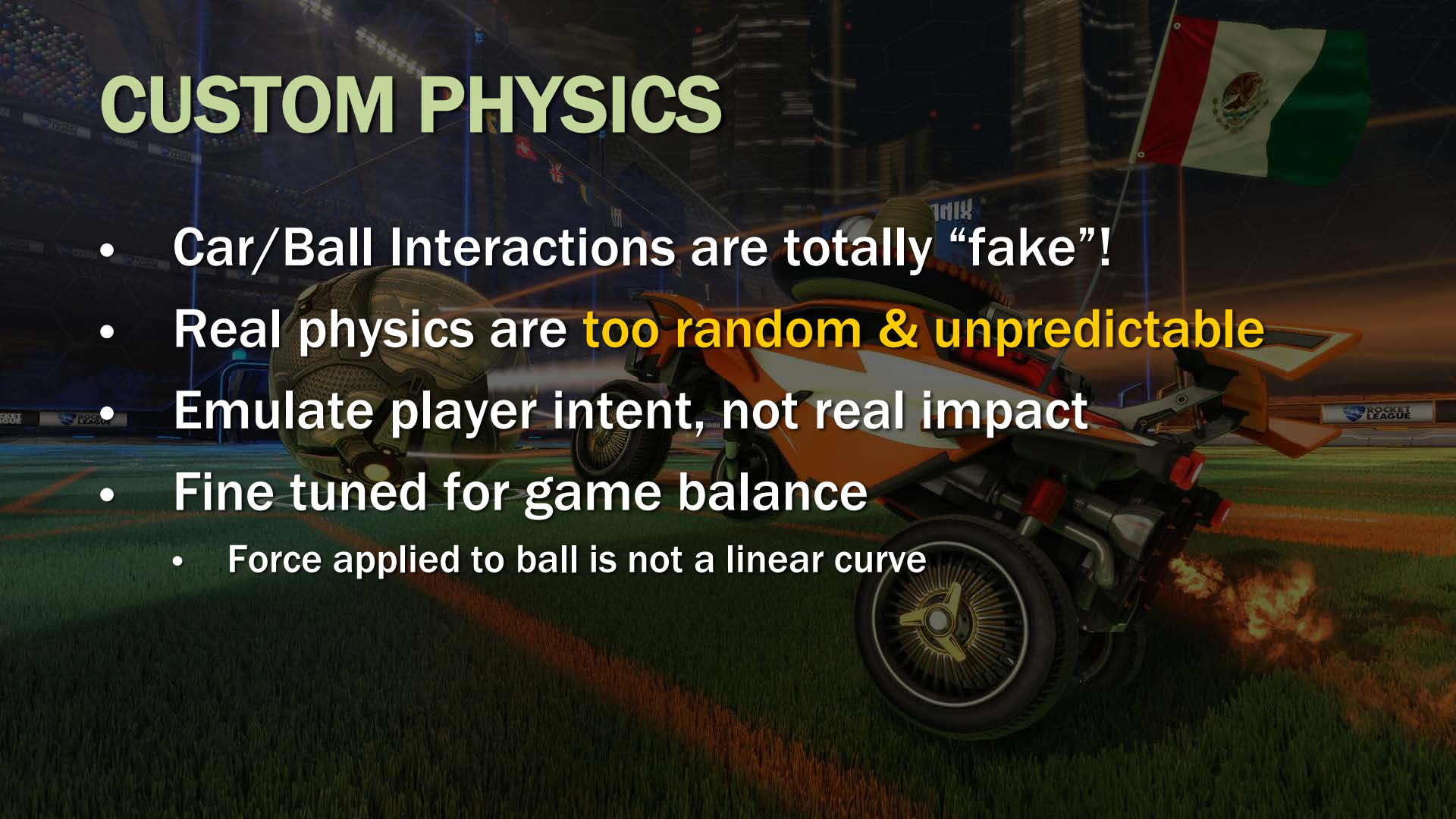
	Rocket League Windows
	METAL GEAR SOLID V: THE PHANTOM PAIN Windows
	ARK: Survival Evolved Windows Apple SteamPLAY
	Counter-Strike: Global Offensive Windows Apple SteamPLAY
	Savage Lands Windows Apple SteamPLAY
	Grand Theft Auto V Windows
	Fairy Fencer F Windows
	The Witcher® 3: Wild Hunt Windows
	Dead Realm Windows Apple SteamPLAY
	H1Z1 Windows

OUTLINE

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CUSTOM PHYSICS

- Car/Ball Interactions are totally “fake”!
- Real physics are **too random & unpredictable**
- Emulate player intent, not real impact
- Fine tuned for game balance
 - Force applied to ball is not a linear curve





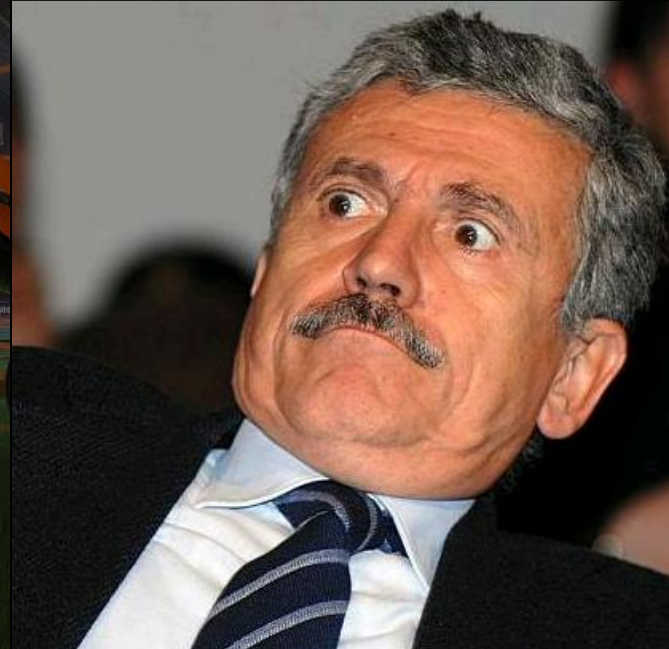


REALISTIC



FAKE

MORE REALISTIC PHYSICS MODEL



UNINTENDED SKILLS

- Overlooked, small mechanic changes can have big effects
- “Dodge” moves now use Impulses instead of continuous Force
 - Tl;dr - Initial burst instead of smooth rotation
 - Turns out being able to time a strong force impact is very tactically useful...



UNINTENDED SKILLS

- At first we thought this was a mistake to be fixed
- In practice, it's a very nice skill mechanic
 - Veteran players can get more powerful shots, but it requires timing and execution
 - Newbies don't do this – games are slower paced and more manageable (something we wanted from the start)
- Increases Tactical Depth
 - Have to sacrifice your “double jump” to pull this off

ZERO SECOND MAGIC

When the clock hits 0:00, the game isn't over until the ball touches the ground!



ZERO SECOND MAGIC

As it turns out, this is an incredible feature for competitive play...



DEMOLISH

- Never balanced or truly designed in SARPBC
 - No penalty for taking opponent out
 - Violent/Aggressive Behavior
- Left it in anyway!
 - Used strategically by top teams
 - Gives less skilled players an outlet
- “Unbalanced” mechanics can be OK!

SCORED BY
Fallen_Dawn

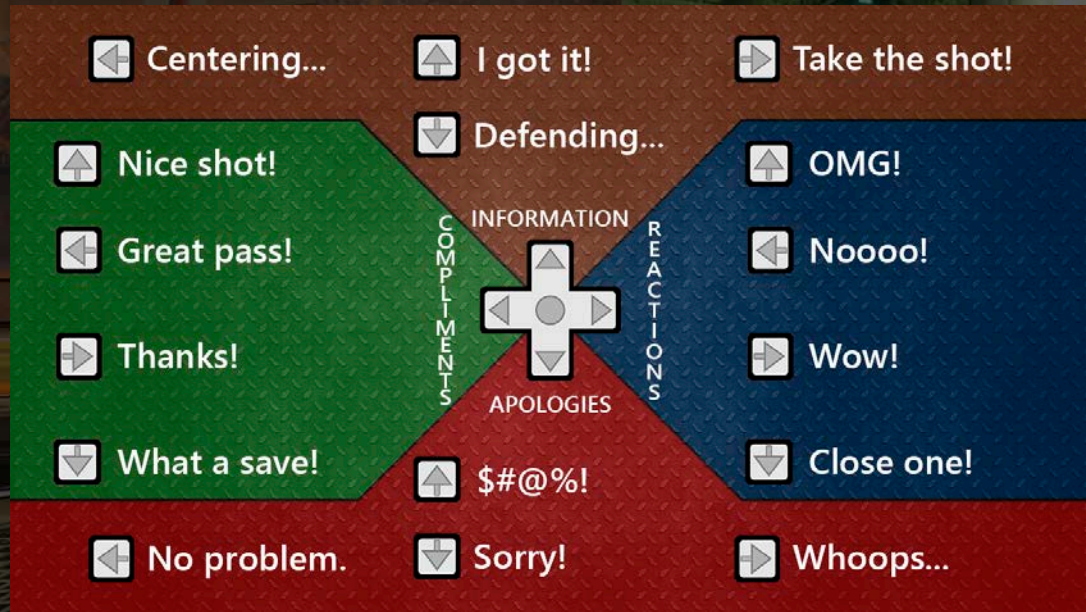
0:36 69 KPH

• REPLAY

PRESS X TO SKIP

chiwitesox14, pjman_34, Fallen_Dawn

QUICK CHAT



[-] **Jmonty24** 164 points 18 days ago

OMG

Wow

Nice shot!

[permalink](#) [source](#) [save](#) [save-RES](#) [report](#) [give gold](#) [reply](#) [hide child comments](#)

[-] **DirkDiggy99** [S] 39 points 18 days ago

Thanks!

[permalink](#) [source](#) [save](#) [save-RES](#) [parent](#) [report](#) [give gold](#) [reply](#)

[-] **Just1MoreGame** 27 points 18 days ago

No problem.

[permalink](#) [source](#) [save](#) [save-RES](#) [parent](#) [report](#) [give gold](#) [reply](#)

[-] **Nateadelphia** SmithAwesome 90 points 18 days ago

What a save!

What a save!


What a save!

Chat disabled for 3 seconds

OUTLINE

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MARKET CONDITIONS - VIDEO



Search

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Games

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Videos

OWED GAMES

You can now follow your favorite games!

Find out more!

NOTED CHANNELS

MissMollyLolly

Twitch

itsHafu

All Games

ROCKET LEAGUE

86,403 viewers

League of Legends

85,538 viewers

Hearthstone: Heroes...

30,358 viewers

Dota 2

20,894 viewers

MINECRAFT

18,441 viewers

Destiny

12,872 viewers

Path of Exile


12,140 viewers

Gaming Talk Shows

10,118 viewers

YouTube

rocket league




PIE FACE CHALLENGE GAME w/ Let's Play ROCKET LEAGUE Part 3: BOTS! (FGTEEV Family Fun)

FGTeeV

6 months ago • 8,599,330 views

FGTEEV Parents & Kids play PIE FACE, a fun pie in your face roulette game but we mixed it with Rocket League on the PS4 for ...

15:08




JE SUIS CHAMPION D'EUROPE! (Rocket League)

SQUEEZIE

7 months ago • 4,353,884 views

Blague que faisait ma grand-mère : champion en partant du bas ! lol xd ptdr Cliquez ici pour t'abonner ➤ <http://bit.ly/1khetSq> ...

8:42




L'ÉQUIPE LA MOINS PRODUCTIVE DE ROCKET LEAGUE

SQUEEZIE

6 months ago • 4,029,478 views

Une équipe un peu nulle. Voilà rien à ajouter. Salut. Cliquez ici pour t'abonner ➤ <http://bit.ly/1khetSq> (merchi) La boutique officielle ...

9:17



Let's Play Rocket League! PARENTS vs. KIDS - Match #2 (FGTEEV Family Gameplay)

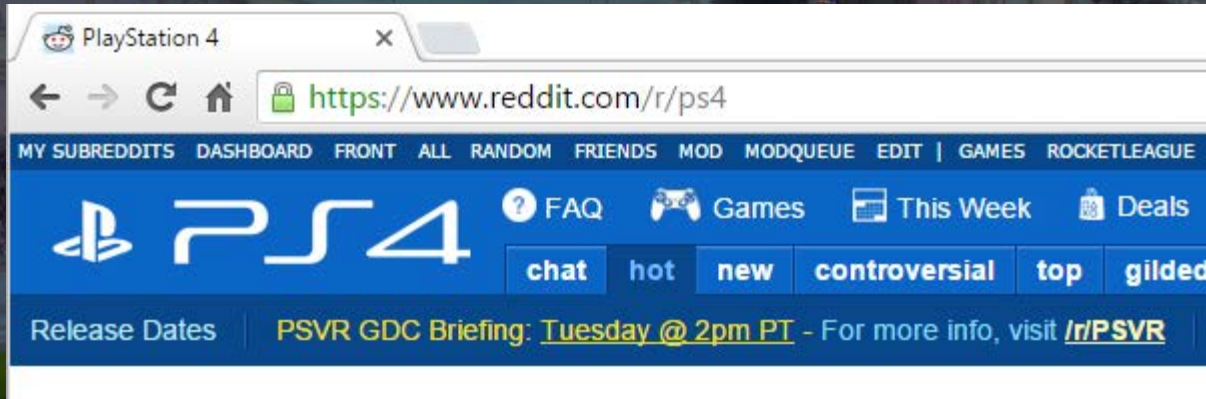
FGTeeV

7 months ago • 4,007,339 views

In this vid, it's FGTEEV Kids vs. Mom for the first match and for the 2nd it's FGTEEV Dad vs. Kids. WHO WILL WIN?!?! Thumbs up ...

#2 14:58

MARKET CONDITIONS - REDDIT



MARKET CONDITIONS - ESPORTS

- Rise of Esports
 - Veteran players gave us a built in “pro scene”
 - Audience is experienced watching other games played professionally – natural transition
- Interest in Smaller Titles
 - Small downloadable games more popular now!
 - Content creators seek out new games to showcase

INHERENT VIRALITY - GIFS

- **Extremely “GIF-able”**
 - Physics are easy to grasp and be wowed by
 - Took over PS4 Subreddit on its own, no marketing effort
- **“Easy to learn, difficult to master”**
 - Fun at all skill levels
 - Difficult plays are aspirational, impressive



INHERENT VIRALITY - STREAMERS

- **Twitch Friendly**
 - Broadcaster Battles happened naturally
 - Pre-Release Early Access for streamers
- **No Paid Promos!**
 - Gave keys on request and hung out in their chat rooms
 - Treat them like humans, not marketing vehicles (“influencers”)
- **Intense Matches & Overtimes -> Subscriber excitement**



INHERENT VIRALITY – PS PLUS

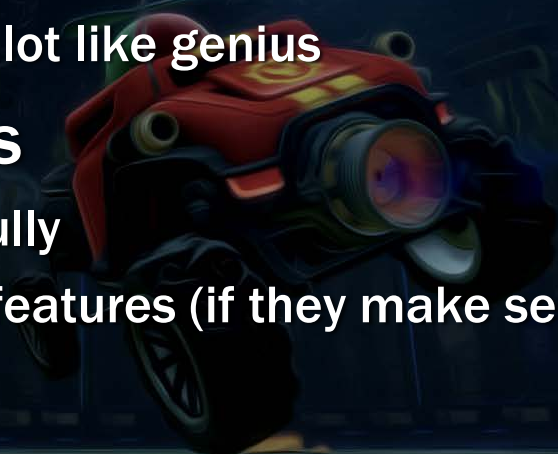


TIMING

- Summer 2015 – Very little competition!
- PS4 game catalog still thin
 - Every release is news! Beta was a big deal!
 - Visibility on PS4 fueled Steam success
- Free Press
 - Nothing else to write about – more Rocket League!
 - Streamers/YouTubers had limited options for new content

LUCK!

- We got really lucky!
- Must be aware of biases when analyzing success
 - One game succeeding doesn't make it repeatable
 - Random luck can look a lot like genius
- Maximizing our odds
 - Schedule releases carefully
 - Build in sharing-friendly features (if they make sense..)



OUTLINE

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MAJOR CHALLENGES - SCALING

- Estimated 10k Concurrent Users..
- Got **180,000**
- Roughly **35X** our beta peak



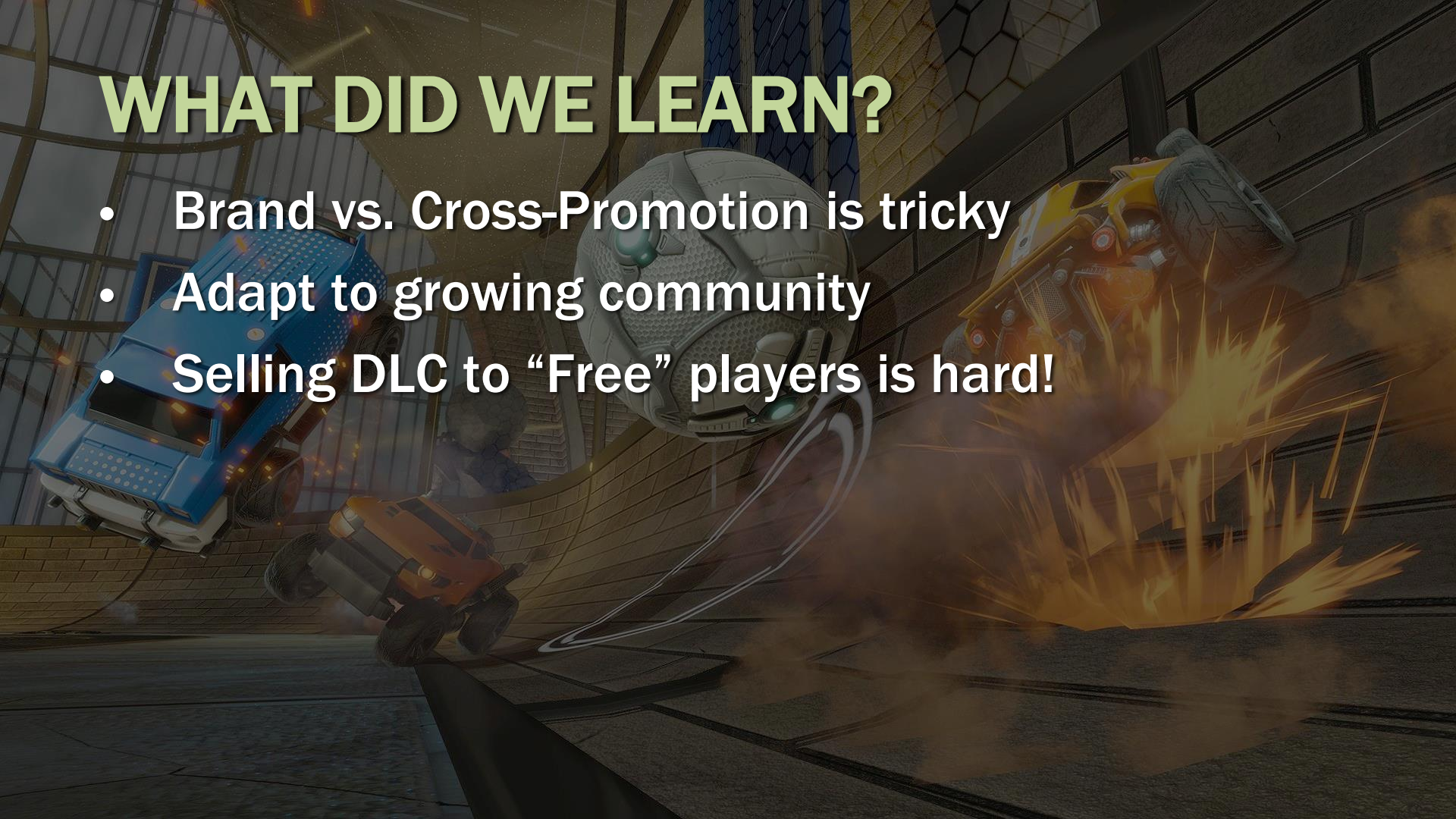
MAJOR CHALLENGES

- Patching on multiple platforms (w/ Cross-Play)
 - Console patch cert requires much stricter planning
 - PC patches are delayed until Sony approves PS4
- Long lead time on DLC releases
 - Cert + “prop time” on console storefronts hurts
 - Add 1 month to DLC dev cycle at minimum



WHAT DID WE LEARN?

- Brand vs. Cross-Promotion is tricky
- Adapt to growing community
- Selling DLC to “Free” players is hard!



WHAT WOULD WE CHANGE?

- Everything we didn't have time to do properly
 - Test our DB at higher scale than our Beta!
 - Plan better for post-release content
 - Day 1 Spectator and Competitive Support
- To go PS+, or not to go PS+?
 - Yes! But...
 - Have something for free players to buy **from Week 1!**

QUESTIONS?

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