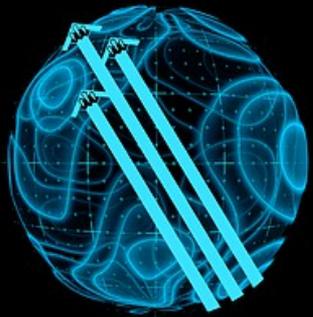


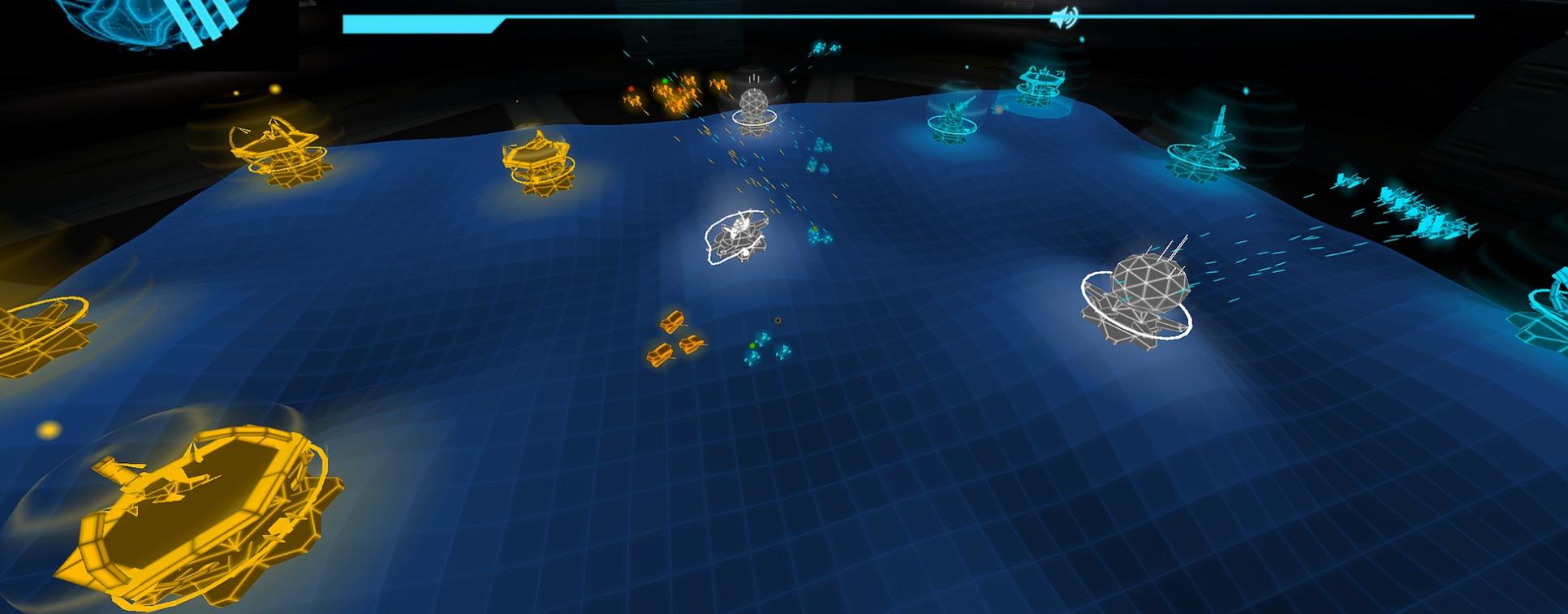


Two Games, Four Platforms: A VR Platform Comparison

E McNeill
Indie Game Designer



TACTERA





DARKNET

- Oculus/IndieCade VR Jam Winner
- Best Gameplay – 2014 Proto Awards
- 2015 IndieCade Finalist

“The best Oculus Rift game I’ve ever played”

Dennis Scimeca, The Daily Dot

“My longtime personal favorite”

Adi Robertson, The Verge

“Closest thing the Gear VR has to a ‘must download’”

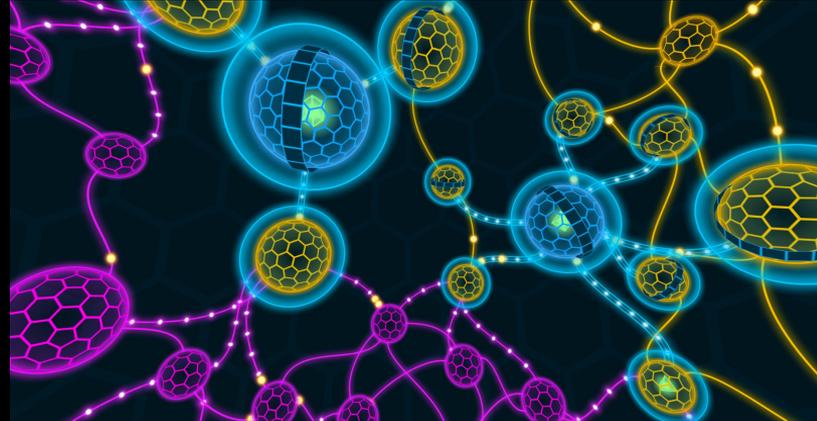
Jeff Dunn, Business Insider

“A ton of fun, and perfectly suited for the medium... It's just a blast.”

Ben Kuchera, Polygon

“Darknet was what I was excited to play every time I put the Gear VR on”

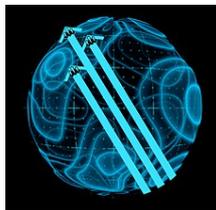
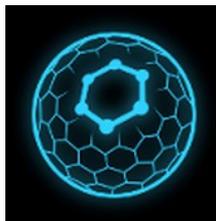
Kyle Orland, Ars Technica

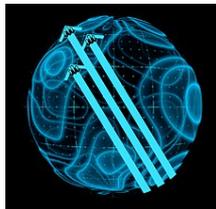


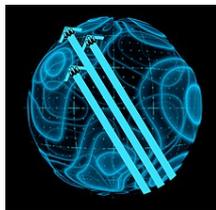
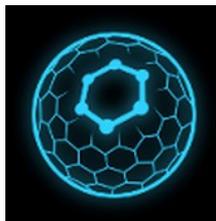




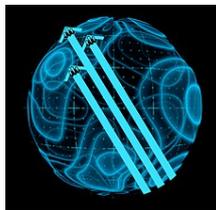
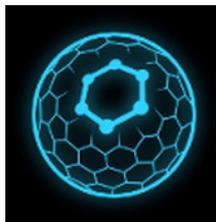








AURALUX
CONSTELLATIONS



LESSON 1: This is stupid. Don't do this.

AURALUX
CONSTELLATIONS

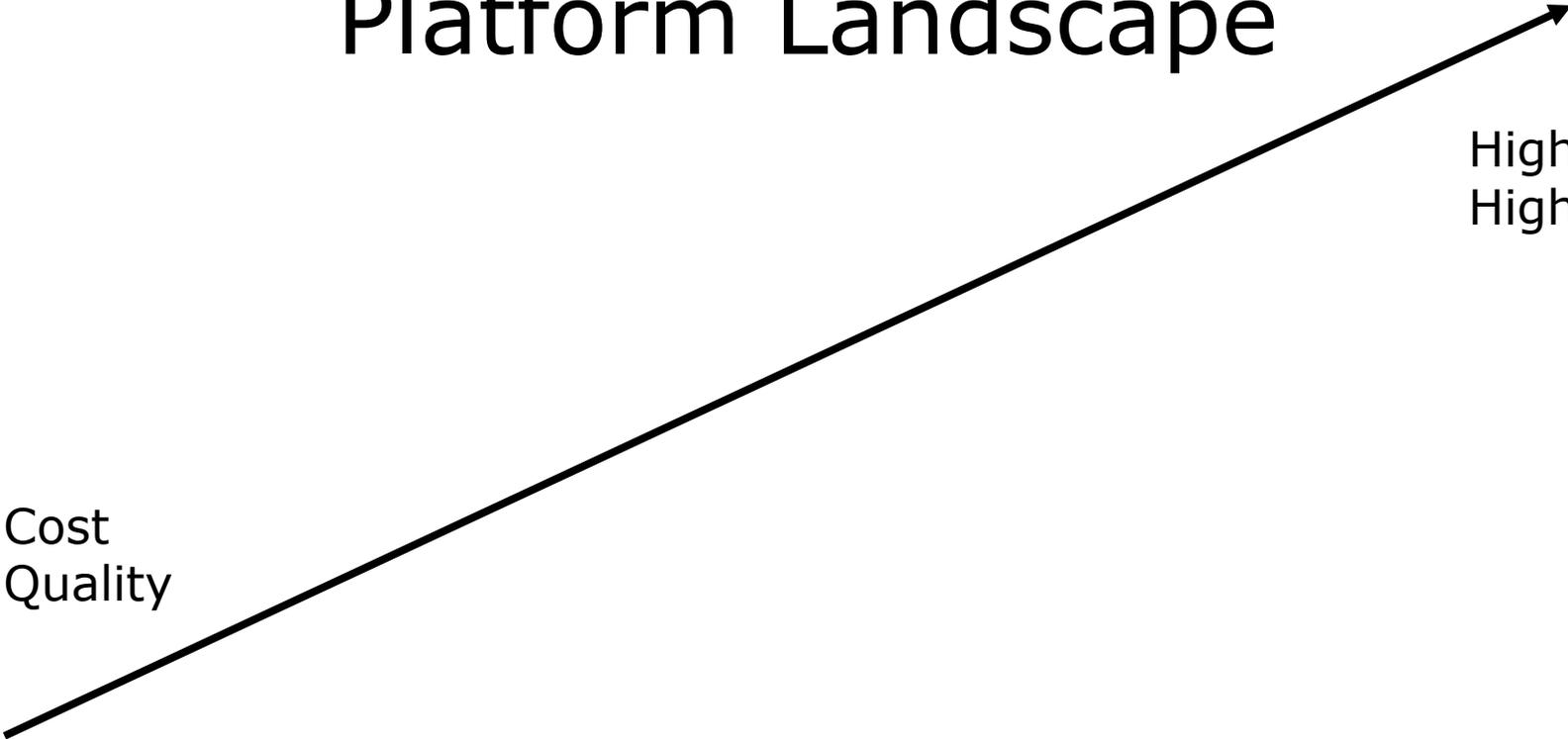
Platform Landscape

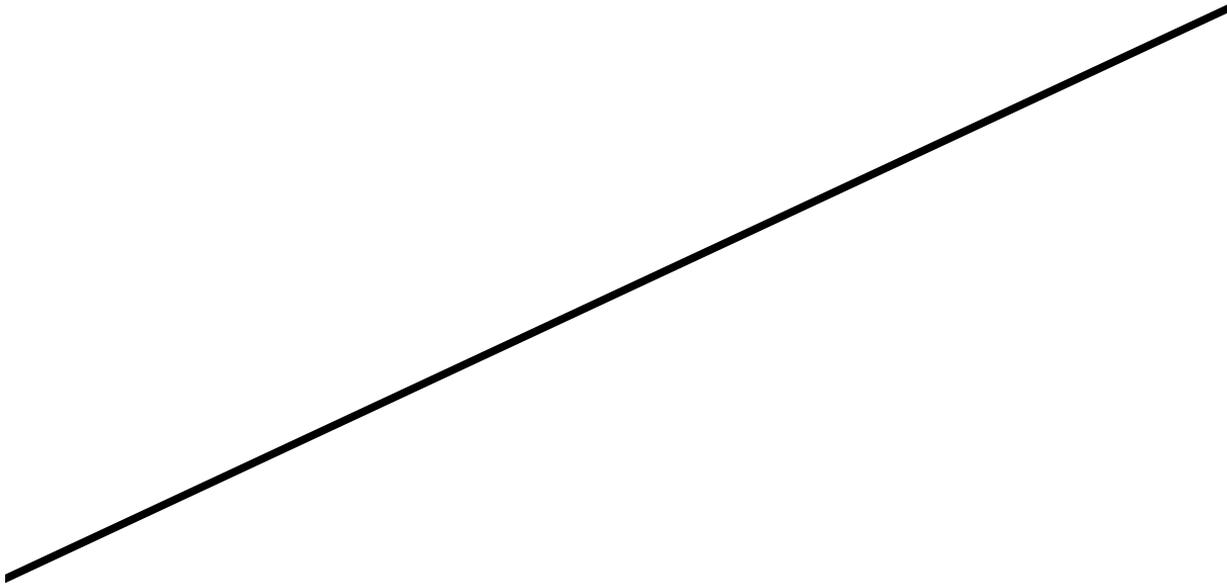


Platform Landscape

Low Cost
Low Quality

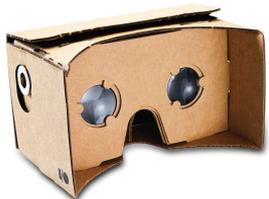
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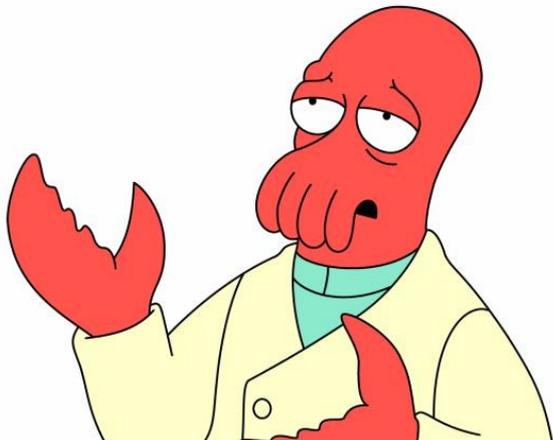






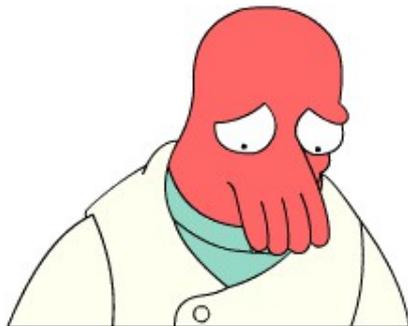
Google Cardboard

- Why not?



Google Cardboard

- Cheap
- Bad



Google Cardboard

- Low-quality player experience



Google Cardboard

- Low-quality player experience
- Lack of features (input, headstrap)



Google Cardboard

- Low-quality player experience
- Lack of features (input, headstrap)
- Fragmented hardware base



Google Cardboard



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- Haven't heard great things about software sales

Google Cardboard



- Low-quality player experience
- Lack of features (input, headstrap)
- Fragmented hardware base
- Haven't heard great things about software sales

- However...

TECH

Google Developing Stand-Alone Virtual-Reality Headset

More advanced version of cardboard viewer wouldn't rely on a smartphone, PC or game console

February 7, 2016 6:43 pm

Google pushes further into virtual reality with new headset

Tim Bradshaw in San Francisco



- 1) Design Implications
- 2) Developer Experience
- 3) Business Stuff

1) Design Implications

Commonalities

Commonalities

- Good engine support

Commonalities

- Good engine support
- It's VR!
 - Nausea
 - UI
 - 3D
 - Etc.



Gear VR

- No positional tracking
- No wires

Gear VR

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- No wires



Gear VR

- No positional tracking
- No wires
- Built-in touchpad
- Gamepad optional



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- 1440p, stereoscopic 3D, 60fps, on a cell phone



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- Gamepad optional
- 1440p, stereoscopic 3D, 60fps, on a cell phone
 - wtf







Oculus Rift & PlayStation VR

- Positional tracking (not room scale)

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- Positional tracking (not room scale)
- Input fragmented
 - Gamepad / Tracked controllers



Oculus Rift & PlayStation VR

- Positional tracking (not room scale)
- Input fragmented
 - Gamepad / Tracked controllers
- Consistent high-end performance
 - "Oculus-Ready PCs" and PS4





HTC Vive

- Room-scale tracking

HTC Vive

- Room-scale tracking
- Tracked hands for all



HTC Vive

- Room-scale tracking
- Tracked hands for all
- High-end recommended PC specs
 - + Steam VRPerformance test



	Performance	Input	Pos. Tracking
Gear VR	Low	Touchpad / Gamepad	None
Oculus Rift	Very High	Gamepad / Hands	Small
PS VR	High	Gamepad / Hands	Small
HTC Vive	Very High	Hands	Room-scale

Darknet

	Performance	Input	Pos. Tracking
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(Plus AR!)

Tactera

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Aperture Robot Repair Demo

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2) Developer Experience

GOOD NEWS EVERYONE!



Commonalities

- Generally dev-friendly!

GOOD NEWS EVERYONE!



Commonalities

- Generally dev-friendly!
- High demand for games

GOOD NEWS EVERYONE!



Commonalities

- Generally dev-friendly!
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- Everything is better if they like your game

GOOD NEWS EVERYONE!



Commonalities

- Generally dev-friendly!
- High demand for games
- Everything is better if they like your game
 - Demos are the currency of the realm

GOOD NEWS EVERYONE!





Oculus (Gear VR & Rift)

- Publicly available dev hardware
 - Oculus still providing some too

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- Some publishing requirements

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 - Still money available!

Oculus (Gear VR & Rift)

- Darknet got funding from Oculus
- \$10M fund for “accelerating indie developers”
 - Still money available!
- Best approach is to have a demo

Oculus (Gear VR & Rift)

- Publicly available dev hardware
 - Oculus still providing some too
- Some publishing requirements
- Funding available
- Dev relations: Great! Lots of support!

Oculus (Gear VR & Rift)

- Publicly available dev hardware
 - Oculus still providing some too
- Some publishing requirements
- Funding available
- Dev relations: Great! Lots of support!
 - If you get their attention



Sony (PlayStation VR)

- Gotta go through Sony to get a dev kit

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- Usual console publishing requirements

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Sony (PlayStation VR)

- Gotta go through Sony to get a dev kit
- Usual console publishing requirements
- Dev relations: Also good!
- Funding available
 - Best if you use unique PSVR features



Valve (HTC Vive)

- Gotta go through Valve to get a dev kit
 - Once rare, but not anymore

Valve (HTC Vive)

- Gotta go through Valve to get a dev kit
 - Once rare, but not anymore
- Loose publishing requirements
 - Greenlight

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Valve (HTC Vive)

- Gotta go through Valve to get a dev kit
 - Once rare, but not anymore
- Loose publishing requirements
 - Greenlight
- Dev relations: Also good!
 - Generally more hands-off



3) Business Stuff

Commonalities

- “The future is unknowable, but the past should give us hope.” - Winston Churchill, probably



Gear VR

- Innovator Edition sales started early, but small
 - Estimate: 100k before consumer launch

Gear VR

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Gear VR

- Innovator Edition sales started early, but small
 - Estimate: 100k before consumer launch
- Sales jumped after consumer launch at \$99
- Getting lots of promotion from Samsung
- ~200 apps in the store so far
- Apps priced at \$0-10, average paid app ~\$5



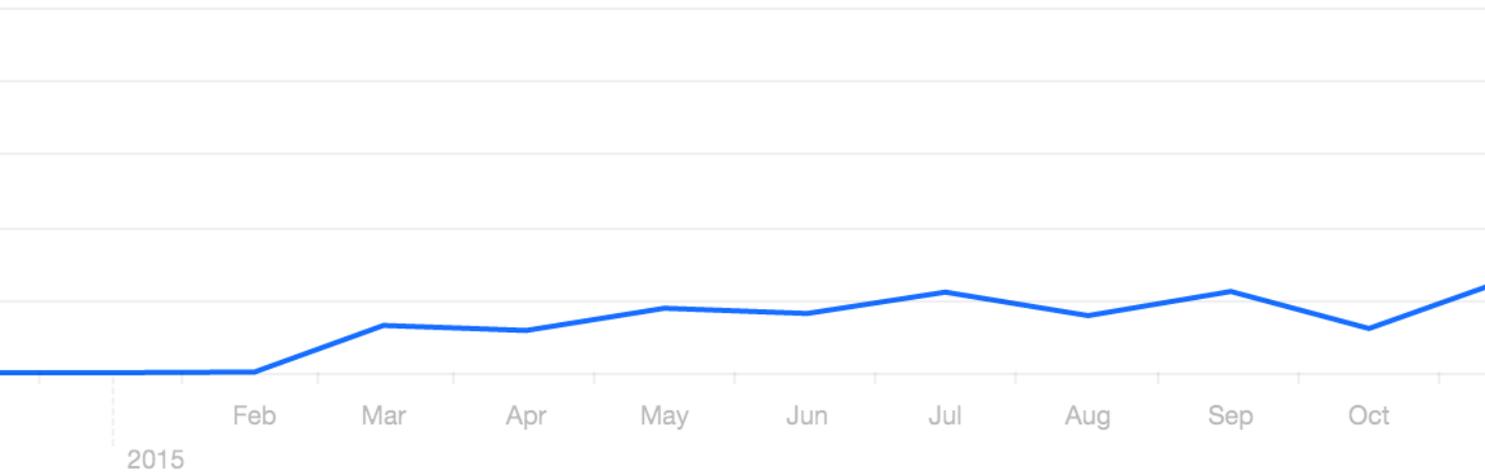
DARKNET

- In March 2015, went on sale for a whopping \$10



DARKNET

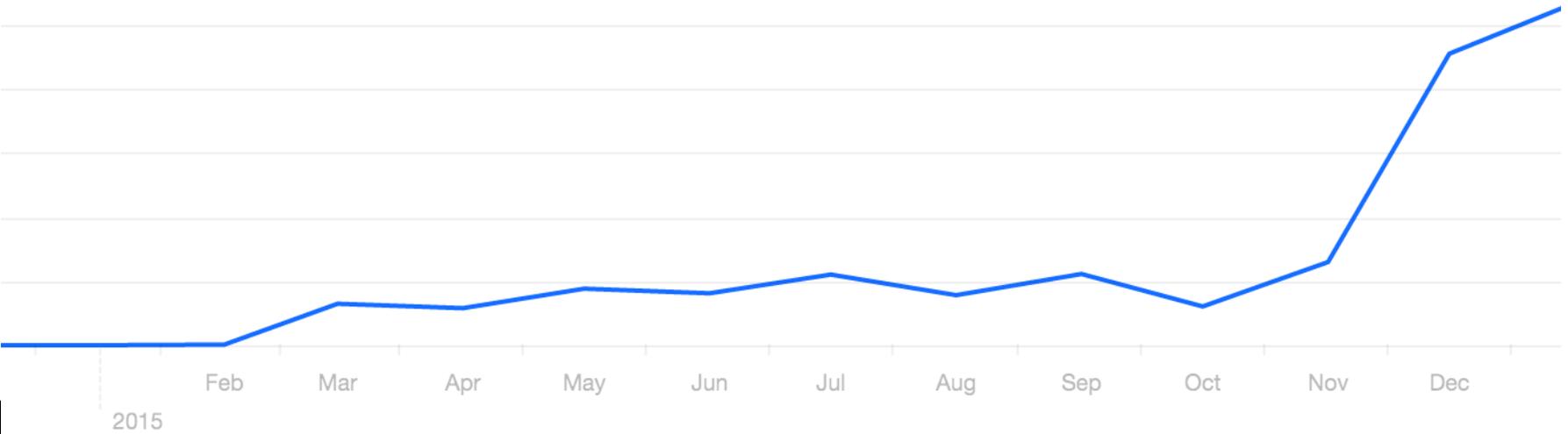
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DARKNET

- In March 2015, went on sale for a whopping \$10
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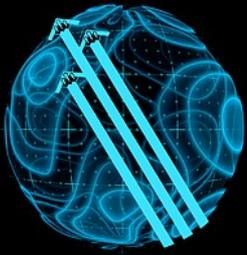




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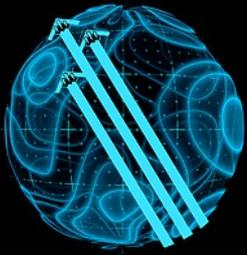
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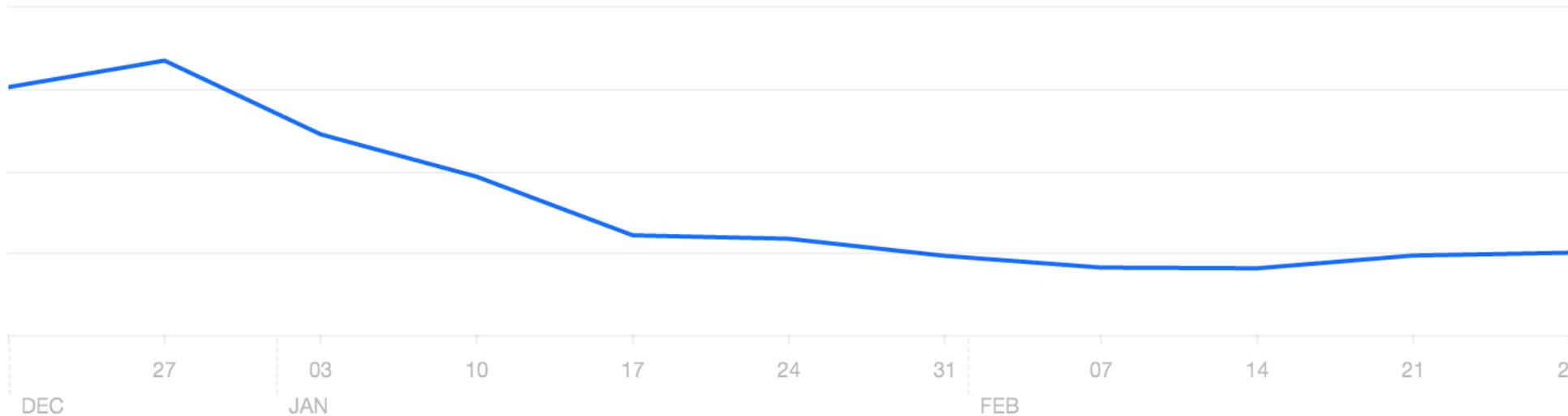
TACTERA

- Free demo launched in December 2015



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Oculus Rift

- Launching March 28, \$599 price tag

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- Set expectations at 1M units over Rift lifetime

Oculus Rift

- Launching March 28, \$599 price tag
- Pre-orders sold out through July
 - 100k-400k units?
- Set expectations at 1M units over Rift lifetime
- Oculus Touch coming H2 2016



PlayStation VR

- Launching H1 2016? Or Fall?

PlayStation VR

- Launching H1 2016? Or Fall?
- Price unknown

PlayStation VR

- Launching H1 2016? Or Fall?
- Price unknown
- Hardware base of 35M+ PS4s

PlayStation VR

- Launching H1 2016? Or Fall?
- Price unknown
- Hardware base of 35M+ PS4s
- Plenty of support from Sony



HTC Vive

- Launching April 2016, \$799 price tag

HTC Vive

- Launching April 2016, \$799 price tag
- Potentially strongest appeal to enthusiasts



HTC Vive

- Launching April 2016, \$799 price tag
- Potentially strongest appeal to enthusiasts
- Marketing via Steam



What's the analogy?

What's the analogy?



What's the analogy?



What's the analogy?



What's the analogy?



What's the analogy?



VS



What's the analogy?



What's the analogy?



What's the analogy?



What's the analogy?



What's the analogy?



What's the analogy?



What's the analogy?



Why target the Gear VR?



Why target the Gear VR?

- You don't need high-end performance, tracking, input, or pricing



Why target the Gear VR?

- You don't need high-end performance, tracking, input, or pricing
- You believe in the platform



Why target PSVR or Rift?



Why target PSVR or Rift?

- You have a high-end game that doesn't need room-scale tracking



Why target PSVR or Rift?

- You have a high-end game that doesn't need room-scale tracking
- You want funding / support



Why target PSVR or Rift?

- You have a high-end game that doesn't need room-scale tracking
- You want funding / support
- You believe in the platform



Why target the Vive?



Why target the Vive?

- Your game takes full advantage of room-scale / hand tracking



Why target the Vive?

- Your game takes full advantage of room-scale / hand tracking
- You believe in the platform



Why target all of them?



Why target all of them?

- You are ~~batshit~~ crazy ambitious



Why target all of them?

- You are ~~batshit~~ crazy ambitious
- Or, you want to hedge your bets



Why target all of them?

- You are ~~batshit~~ crazy ambitious
- Or, you want to hedge your bets
- Your game is flexible enough to make it work







GDC

Thank you!

@E_McNeill

E McNeill
Indie Game Designer



GDC

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E McNeill
Indie Game Designer