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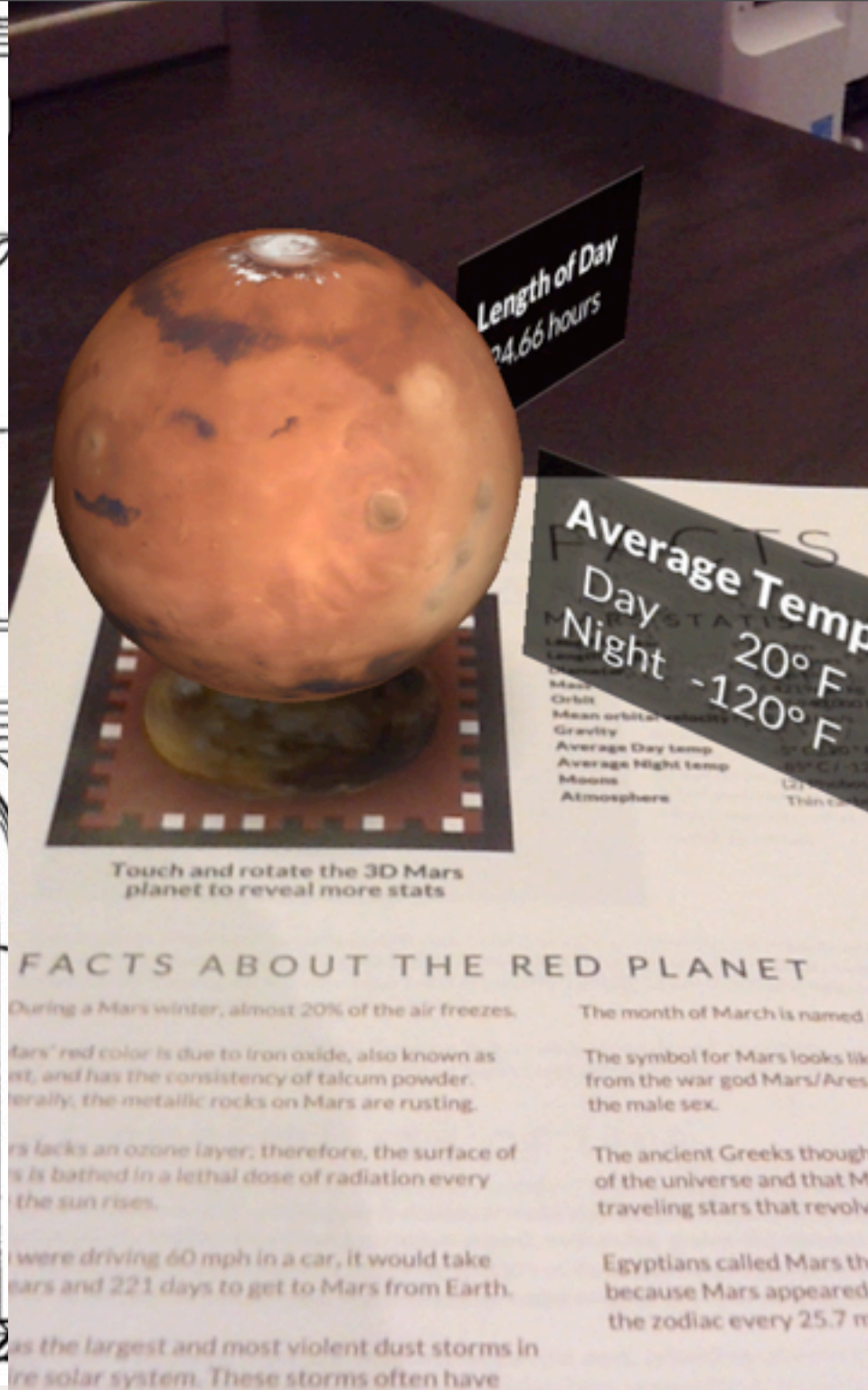
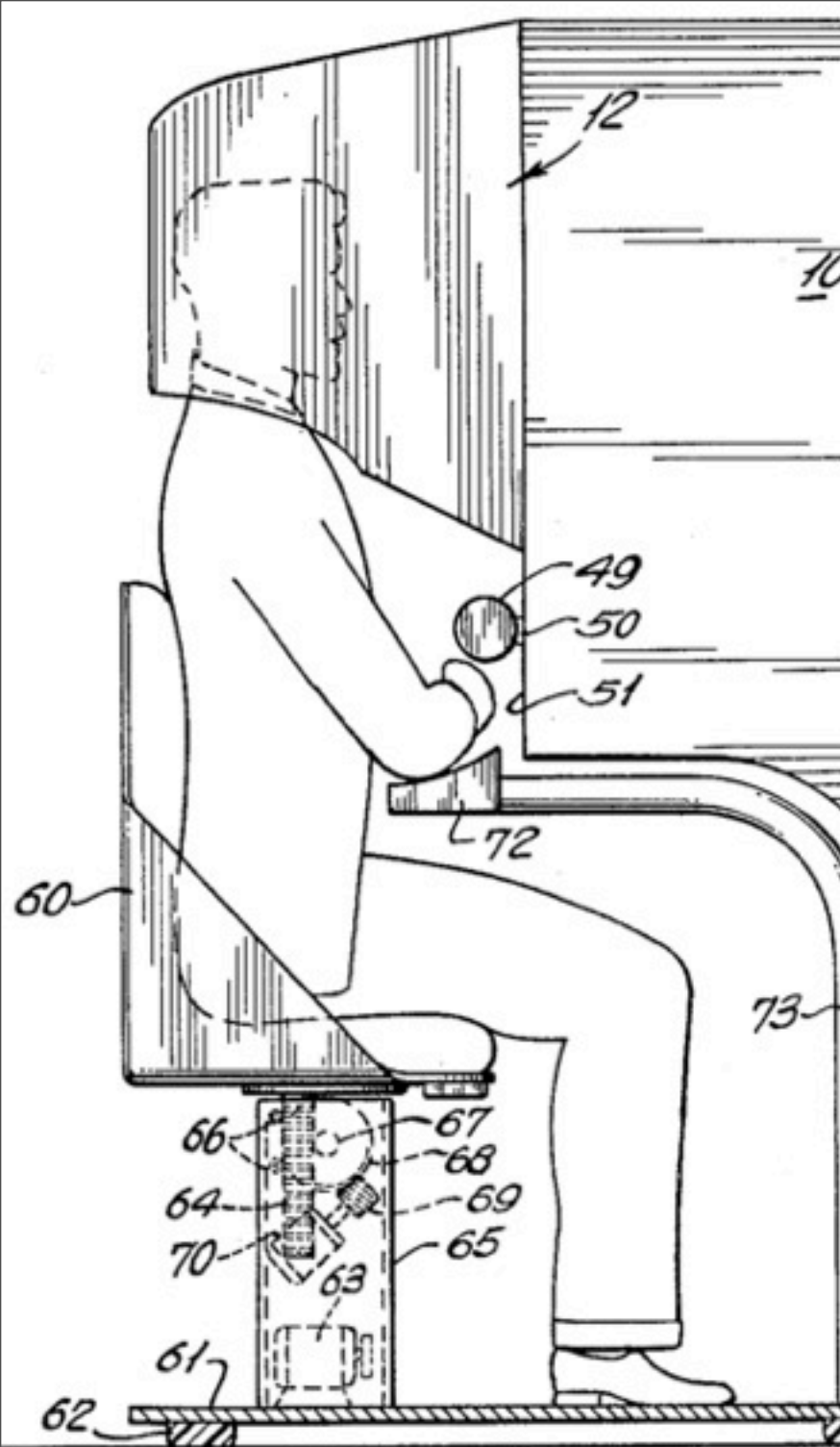
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Los Angeles, CA

GDCNext.com

Beyond the Box

Opportunities in Augmented Reality

@AdvInteractions



Definition &
(Brief) History

Dev Tools & the
Vuforia SDK

Into the Future
of AR Gaming

About Me

Freelance

Digital Strategy

Front-end Development

Unity3D

Motion Design

Web Design

C# /JS

Marketing

Mobile AR

Interactive Director

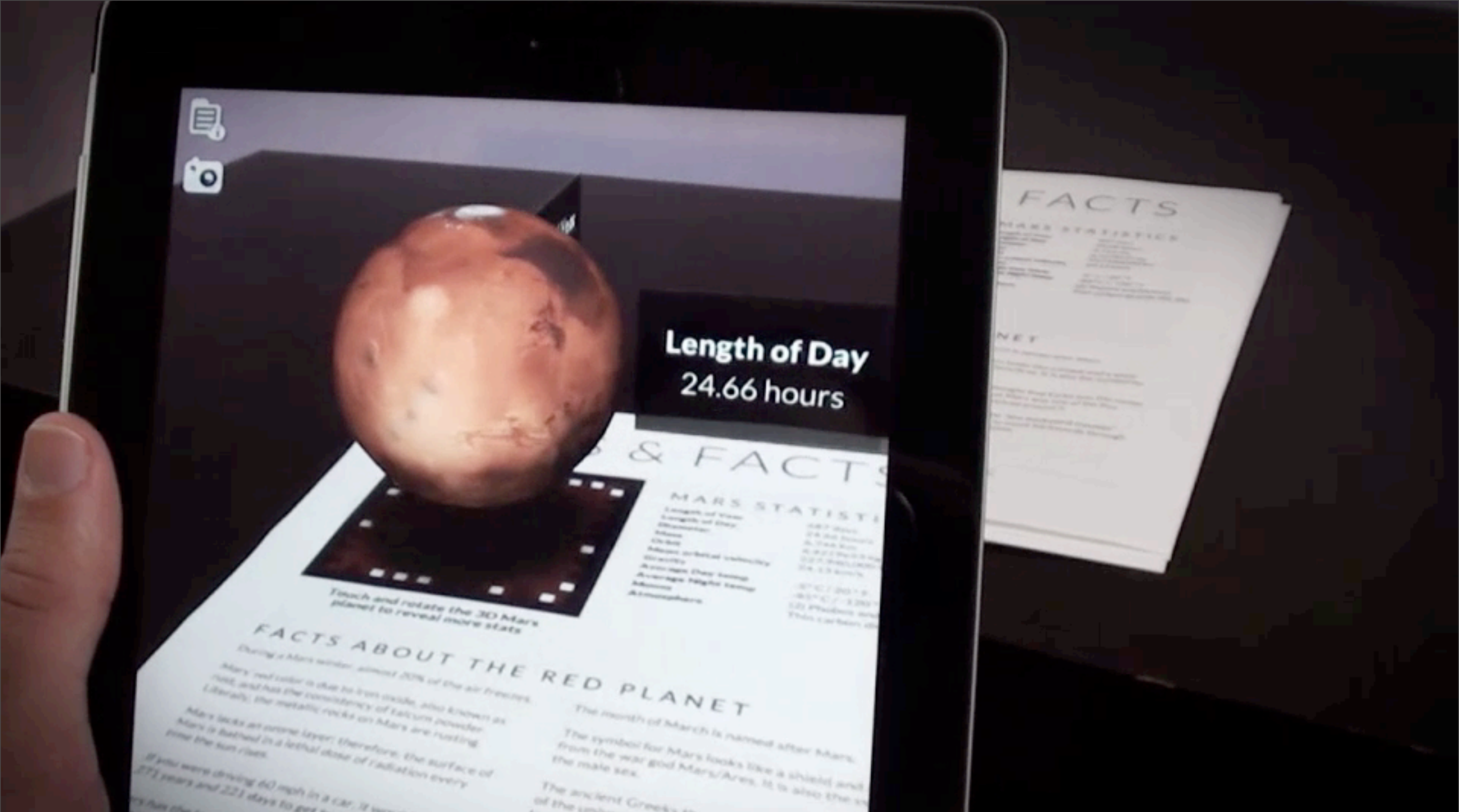
WordPress

Financial Services

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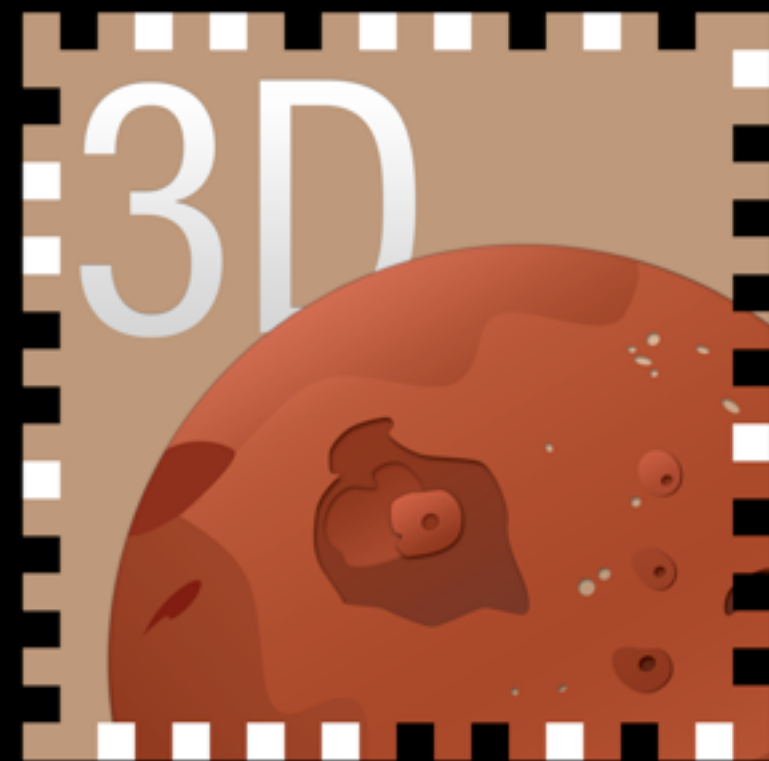
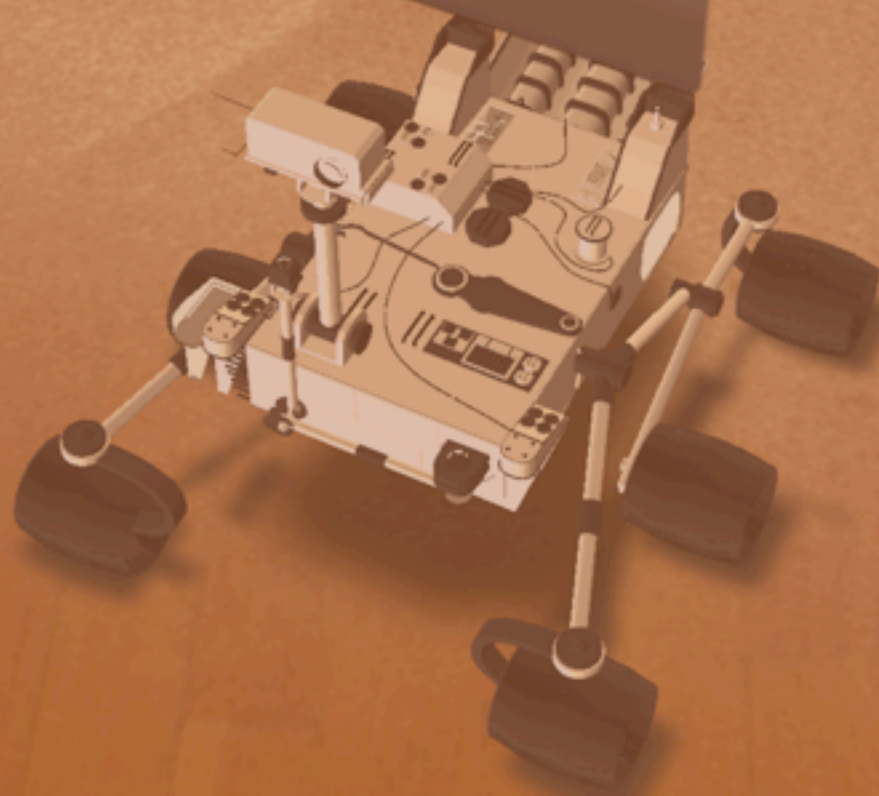
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Experience Mars

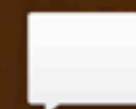
During a Mars winter, almost 20% of the air freezes.



Experience Martian weather broadcast live from the Curiosity Rover.



Single tap on the screen to move Curiosity around.



Look for the pop ups to learn more information about Mars.



To start print off the marker, and point your camera at it.

[EMAIL LINK TO MARKER PDF](#)

Have fun exploring on Mars!

↑ 3.05c/-69.47c ↓
Apr 3, 2013 UTC

[TWEET SCREENSHOT](#)



SOL DATE

231



SEASON

Month 10



ATMOSPHERIC
PRESSURE

889.18 ↑





Point your camera
at this marker for
help navigating
this Terminal



mci
kansas city
international

Terminal Guide



Help Frosty find the North Pole before he melts away!



Single tap on the screen to move Frosty around.



Watch out for the fires! Frosty will melt if he gets too close.



To start point your camera at the image on our Holiday Card.

Happy Holidays from the Cody's. Enjoy!



Help Frosty find the North Pole before he melts!



Available on the App Store

Visit the App Store and Search:
"Cody Holiday Card"
iPad 2+ and iPhone 4S+ supported



What is AR?

Augmented reality (AR) is a live, direct or indirect, view of a physical, real-world environment whose elements are augmented by computer-generated sensory input such as sound, video, graphics or GPS data.

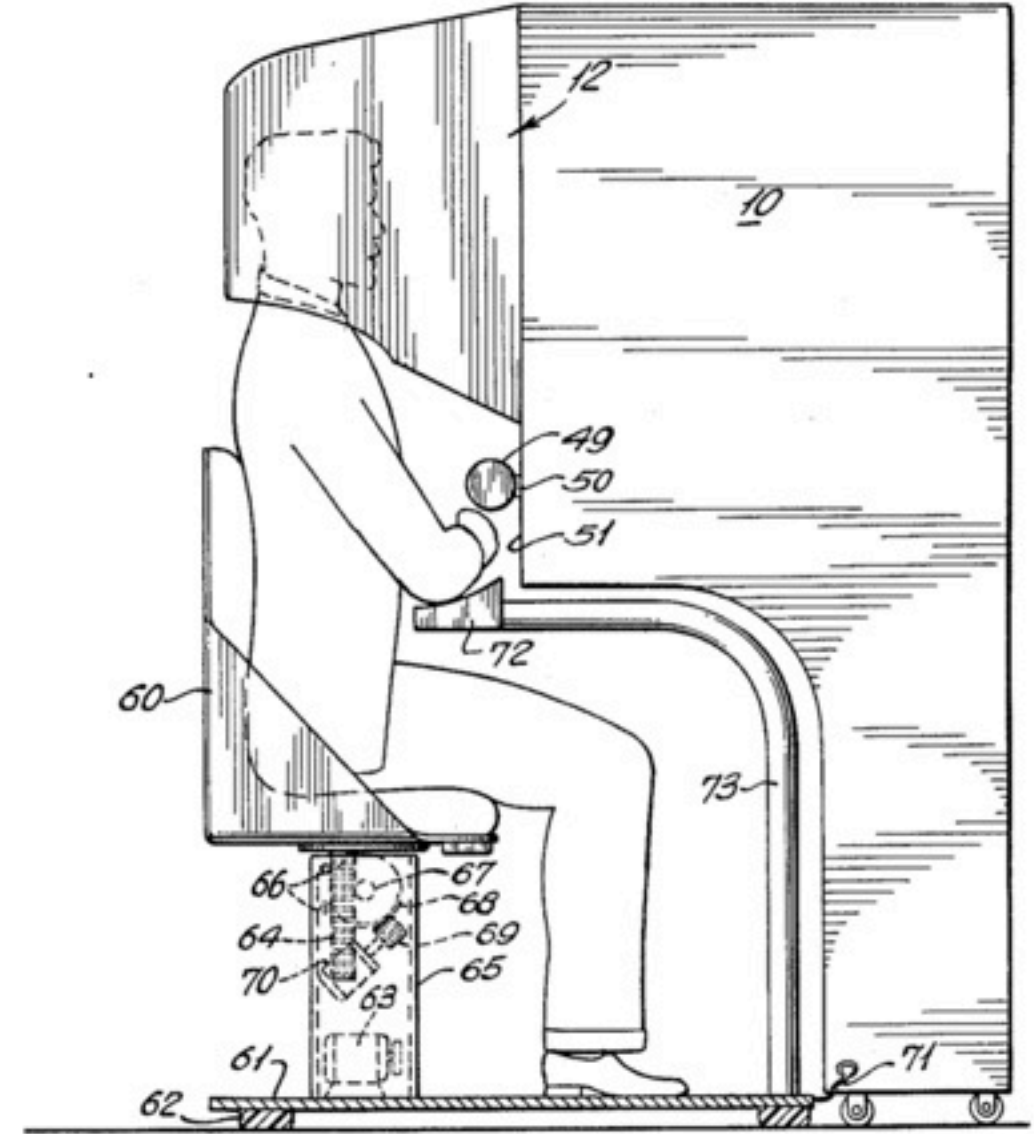
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History of AR

- **1957** - Morton Helig began building a machine called the Sensorama.
- **1966** - 1st HUD via Professor Ivan Sutherland of Electrical Engineering at Harvard
- **1992** - AR system for the US Air Force known as VIRTUAL FIXTURES



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History of AR

- **1999** - Hirokazu Kato releases ARToolKit to the open source community.
- **2000** - Wearable Computer Lab in Australia demos 1st outdoor mobile ARQuake game
- **2008** - the first AR apps come to smartphones



Augmented Reality
Business Card



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vuforia

by Qualcomm



wikitude

StringTM
Augmented Reality

metaio

AUGMENTED SOLUTIONS



Development Tools

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NEXT

options for mobile Augmented Reality Games



PROS

- Extremely fast & easy with in Browser Tools
- Affordable (\$180/10 Pages)
- AR Video & GPS support
- Android & iOS support

CONS

- Focused Primarily on Interactive Ad Campaigns
- Lacking 3D animation & power required for games



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PROS

- Fast, efficient technology for iOS
- Clean and simple tutorials
- Easy to plug into any iOS project
- Unity 3D plug in

CONS

- No Android support (coming Q4??)
- Lacking major features
- Requires black border
- Expensive! (\$499/yr for 1 App with 1 marker)



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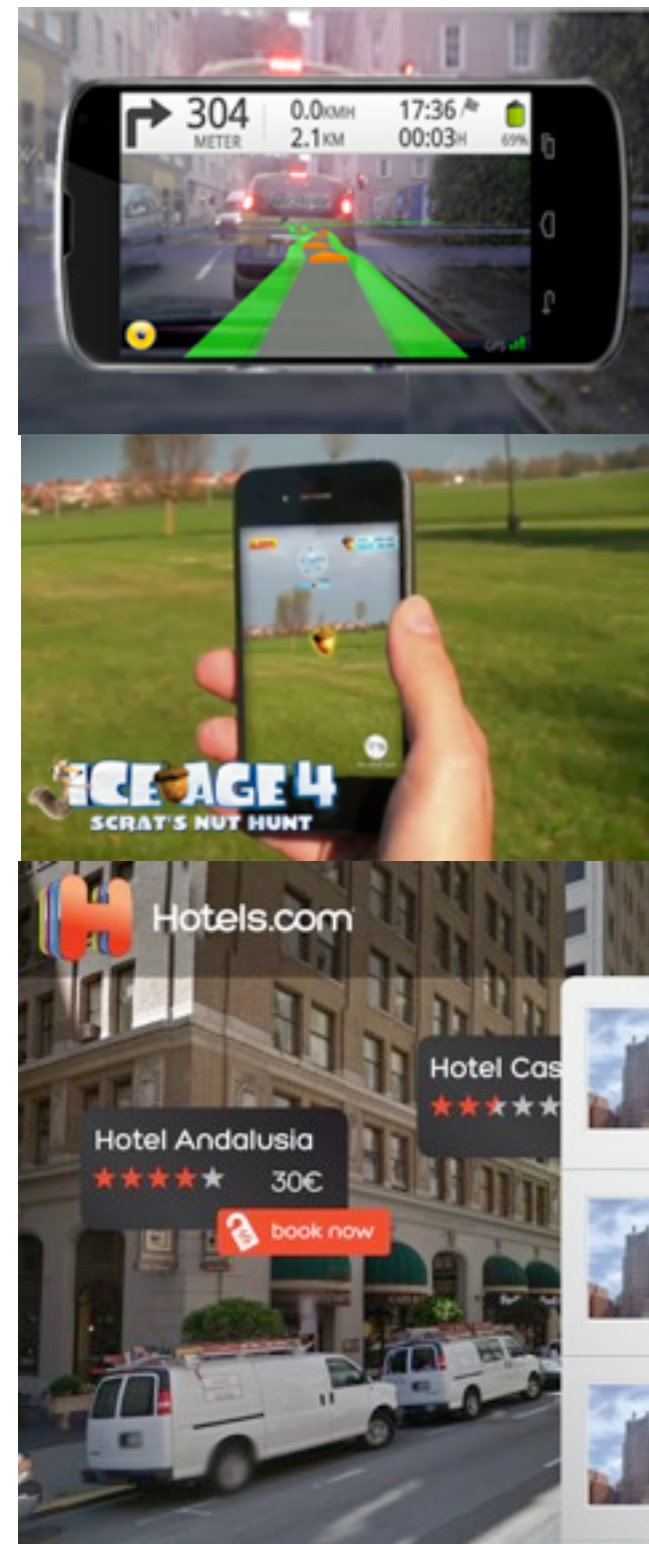


PROS

- Fast & easy web based creation studio
- Plugins for PhoneGap
Appcelerator
Titanium, MonoTouch
and MonoDroid
- AR Video & GPS support
- Supports iOS, Android

CONS

- Expensive! (\$825
SDK LITE / \$2,065
SDK PRO)



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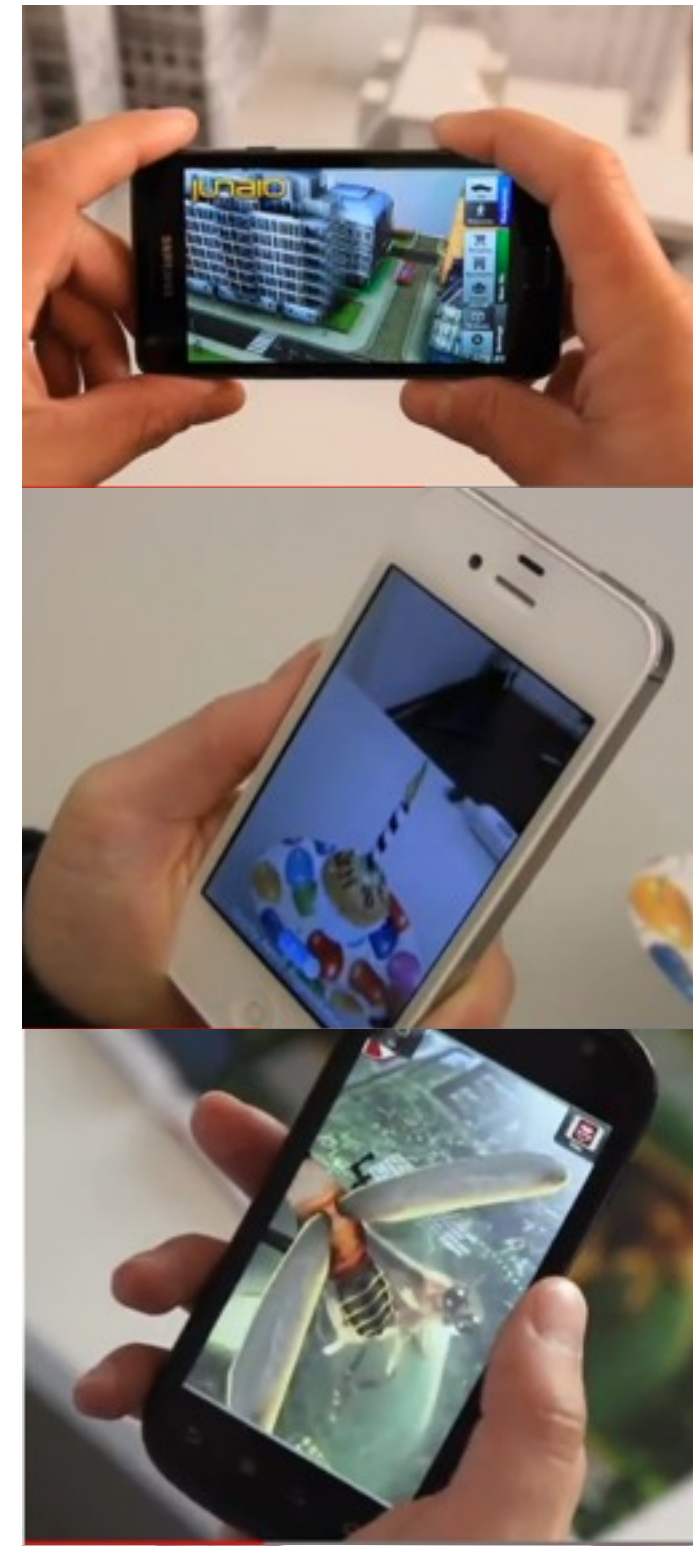


PROS

- Fast & easy web based creation studio
- Powerful 3-D
- Cloud support, 3D object feature tracking
- Supports iOS, Android and Desktop
- Free with watermark

CONS

- Expensive! (\$3,490 for BASIC unlimited App development)
- Missing some features that Vuforia has...



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PROS

- Powerful 3-D rendering engine & Unity Plugin
- Cloud support, cylinder object feature tracking & many more!
- Supports iOS, Android
- Free (EULA required)

CONS

- No Desktop support
- No 3D object tracking... yet
- No GPS Support



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vuforia
by Qualcomm



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Vuforia SDK

for Mobile AR Development

@AdvInteractions

Tools & Costs

FREE



Vuforia AR Dev
SDK

\$100



1yr Apple Dev
License

\$400



Unity3D iOS
License

\$500



16 gb Apple 3rd
Gen iPad



Blender

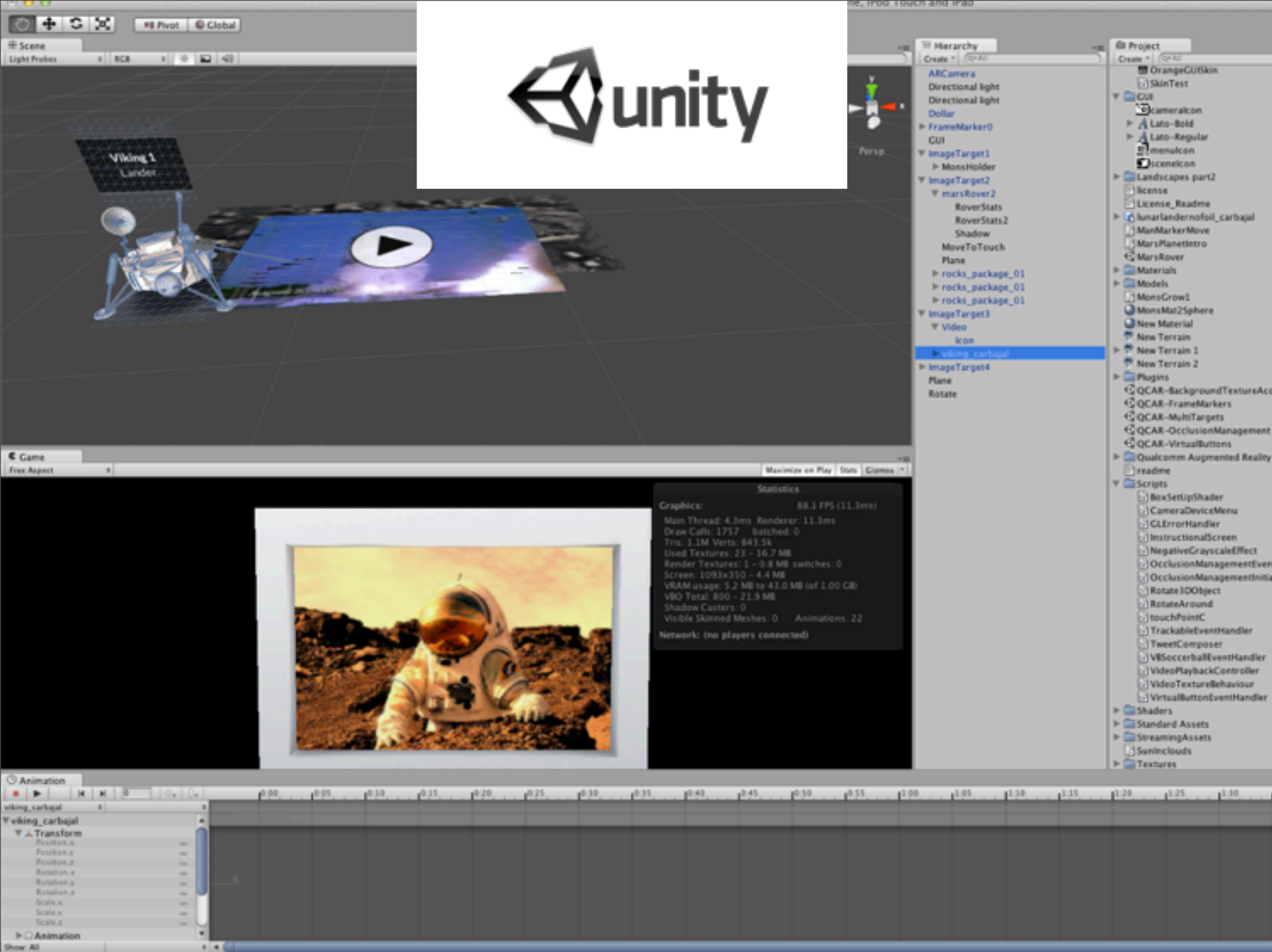


MonoDevelop

TOTAL COST = ~\$1,000

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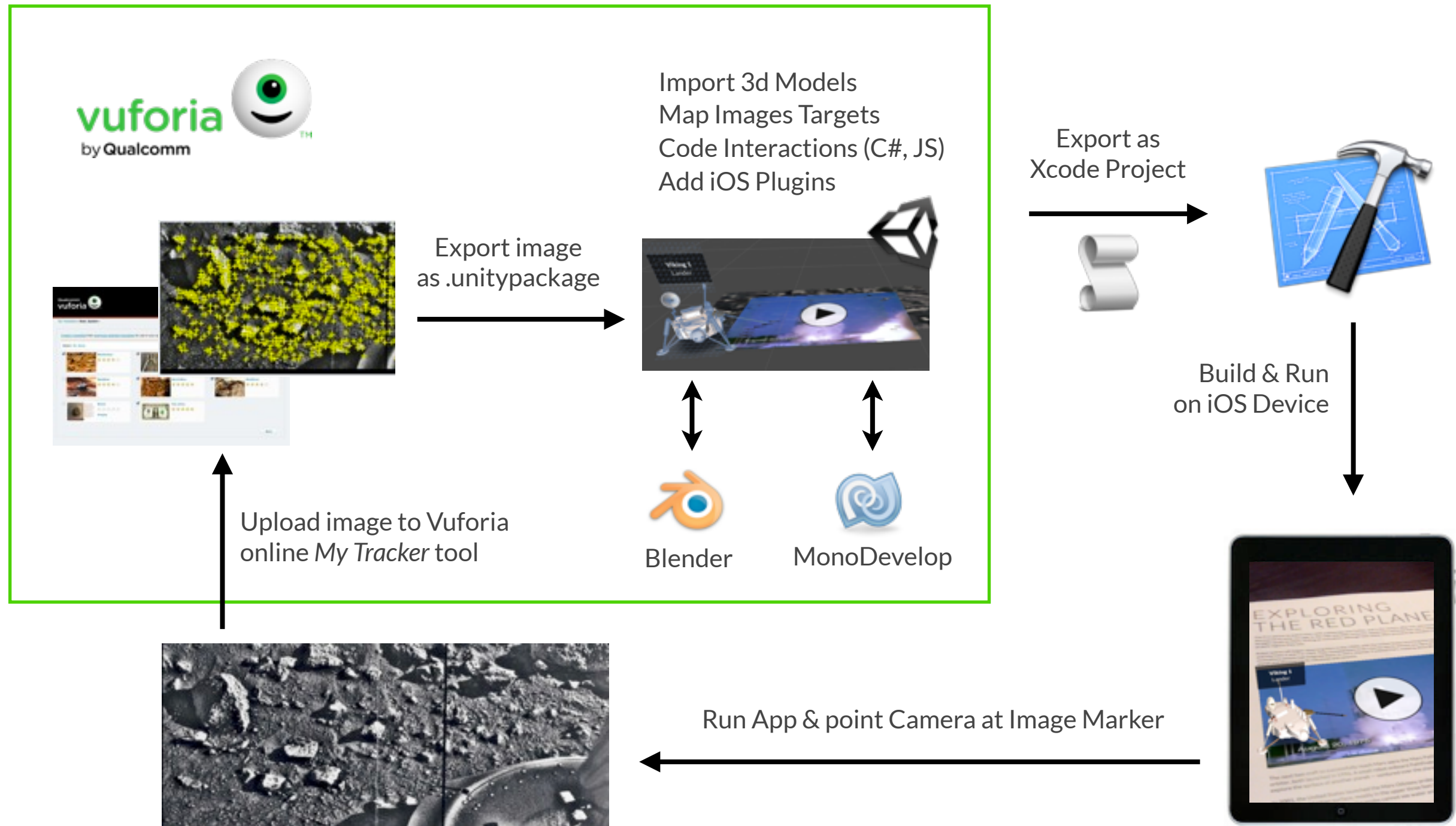
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Unity3D
game development tool

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Vuforia/Unity Workflow



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Current State

How are developers & brands leveraging **Augmented Reality**?

OPPORTUNITIES

- Real World Gaming
- Product Promotions
- 3D Visualization
- Immersive Gameplay

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Real World Gaming

GPS based games creating immersive experiences

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SUPER HERO™ AUGMENTED REALITY

FEATURING

MARVEL

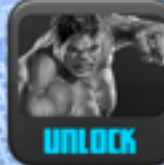
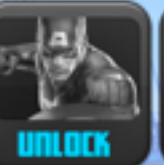
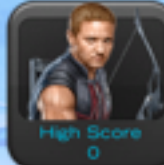
THE AVENGERS™

IN THEATRES MAY 4, 2012

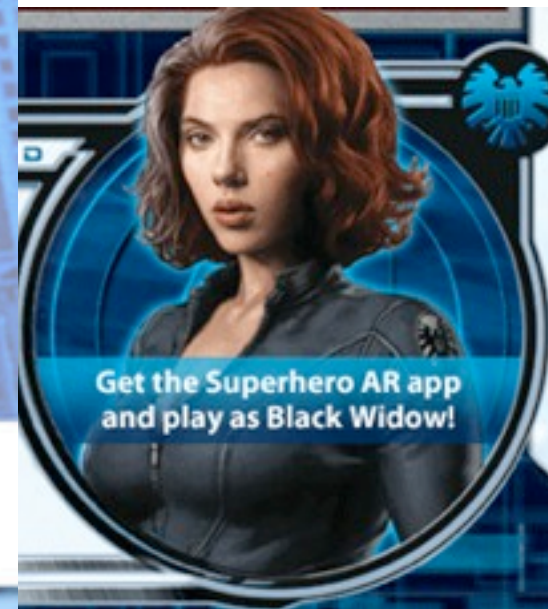
TM & © 2012 Marvel & Subs.
Super Hero is a co-owned registered trademark.

Only at
Walmart

SELECT YOUR AVENGERS



Walmart



Product Promotions

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“Advertainment” games tie physical & digital products



3D Visualization

some applications just work better in 3D

SONY
make.believe



Immersive Gameplay

new mechanics for existing systems

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Current State

So why hasn't **Augmented Reality** taken off yet?

LIMITATIONS

- Technology is in its infancy
- Brand new mechanics
- 'Gimmicky' Content
- *Awkward User Experience*

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Into the Future

Beyond the Box with Augmented Reality

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Boxed Media

- Contained in a isolated environment
- Fixed in two dimensions (0, 0)
- Main purpose is consumption
- It's... Books, TV, PCs & Mobile Devices

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We spend
70.6 hrs
per week
in The Box



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A large iceberg floating in a blue ocean under a blue sky. The tip of the iceberg is visible above the water, while the much larger, jagged base is submerged below the surface. The water is a deep blue, and the sky is a lighter blue with some wispy clouds.

The Box

Media

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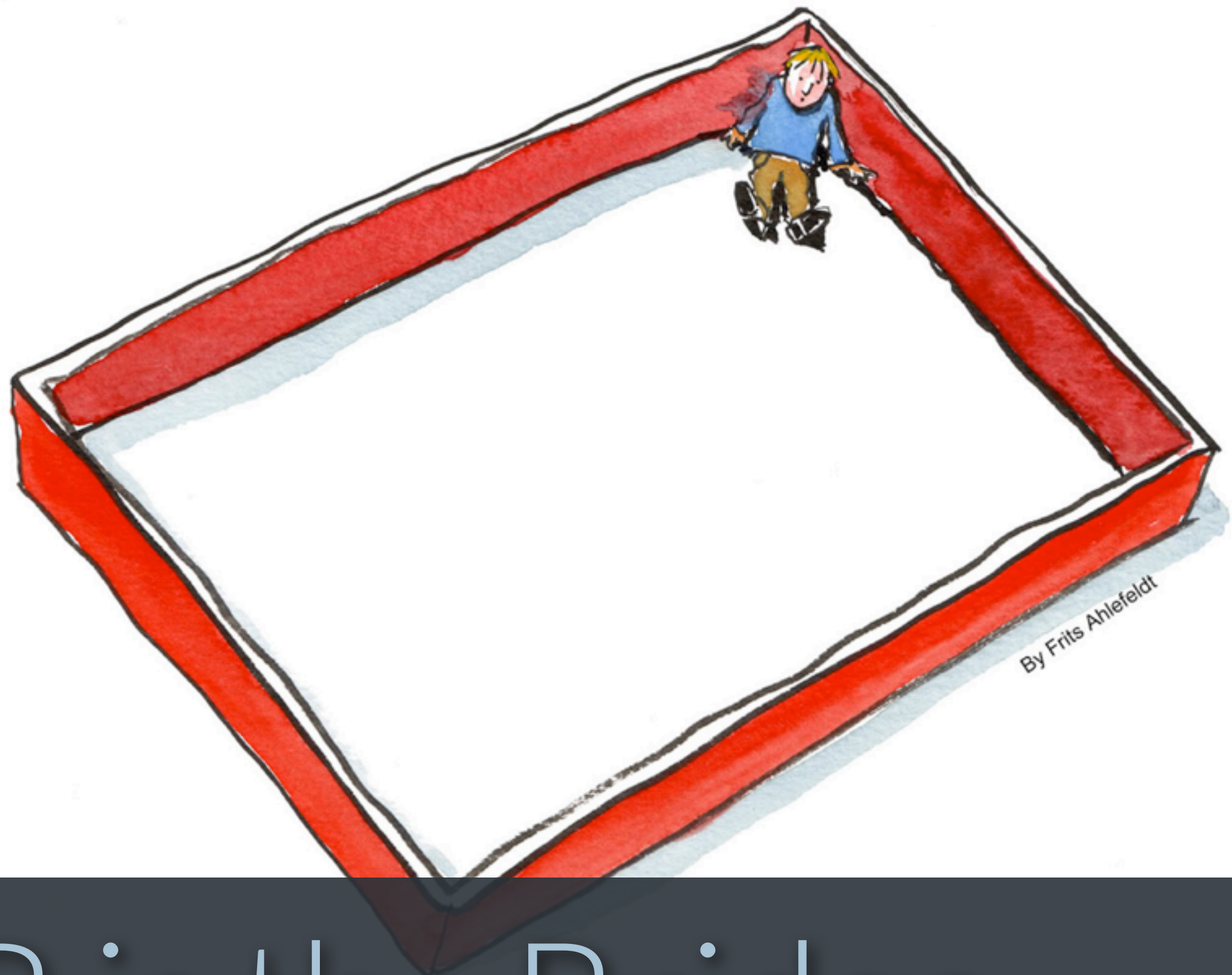
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Media & Life

still two different sides of the window

@AdvInteractions



AR is the Bridge

to get us out of The Box...

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GUI to XUI

instead of looking through the window we step through it!

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Coming Soon...

Google™

LEAP

vuforia
by Qualcomm

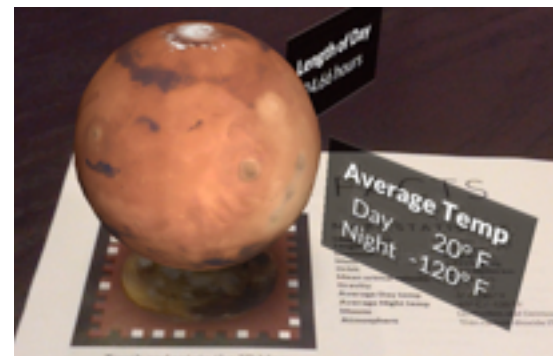
THALMICLABS



+



+



+



=

Iron Man &
Minority Report!



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Translation Enabled
Rotation Enabled
Scaling Disabled

Statistics

Graphics: 87.2 FPS (11.5ms)
Main Thread: 11.4ms Renderer: 0.7ms
Draw Calls: 12 Saved by batching: 0
Tris: 622 Verts: 710
Used Textures: 7 - 91.3 KB
Render Textures: 3 - 1.8 MB switches: 1
Screen: 1035x567 - 6.7 MB
VRAM usage: 8.5 MB to 8.7 MB (of 1.00 GB)
VBO Total: 18 - 219.6 KB
Shadow Casters: 0
Visible Skinned Meshes: 0 Animations: 0
Network: (no players connected)



Press 'h' for help
Leap SDK version 0.7.1

Very Soon...

Combining Unity, Vuforia & Leap Motion

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Wrapping Up

- AR has many hurdles to over-come but is evolving rapidly
- Big brands are leveraging today's AR Tools to create rich experiences
- AR is the vehicle for building the next generation of games

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Thank you.

Brian Cody

info@AdvancedInteractions.com

www.AdvancedInteractions.com

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