



THE FLASH GAMES POSTMORTEM

#gdc17

John Cooney - Kongregate

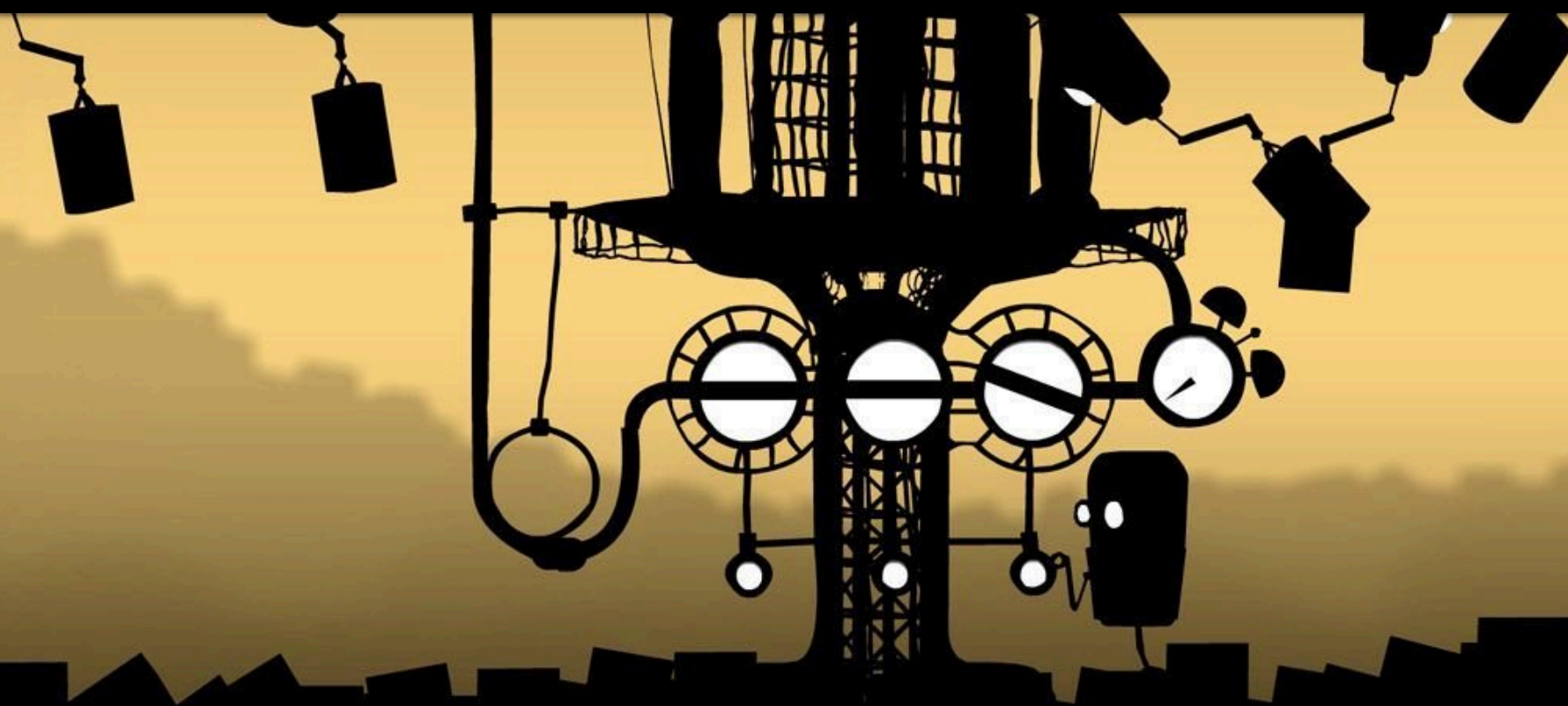
@jmtb02

Flash games have a reputation
for being distractions or
lunchtime time-wasters





But in-reality, Flash games and developers
formed the foundation of the modern indie game scene



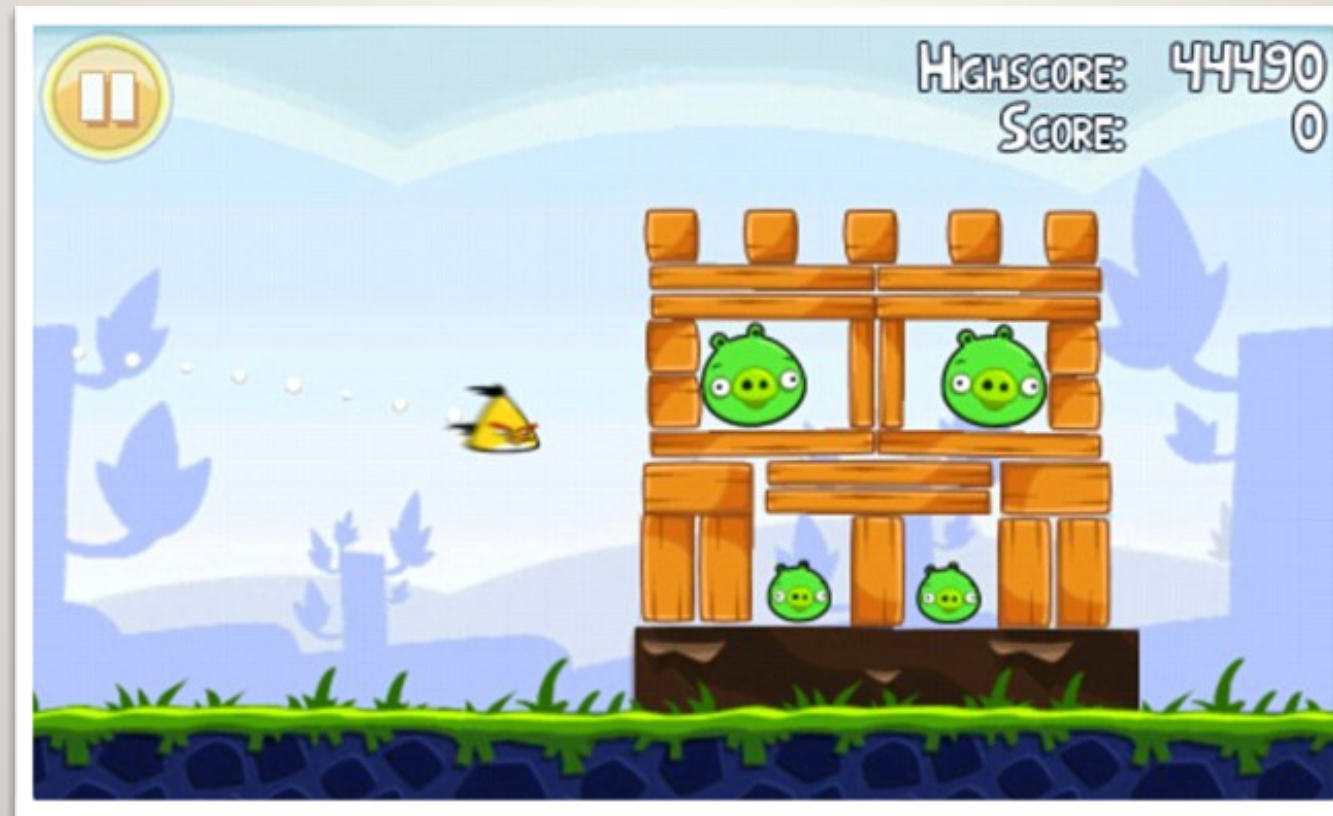
Many games and developers were born in Flash



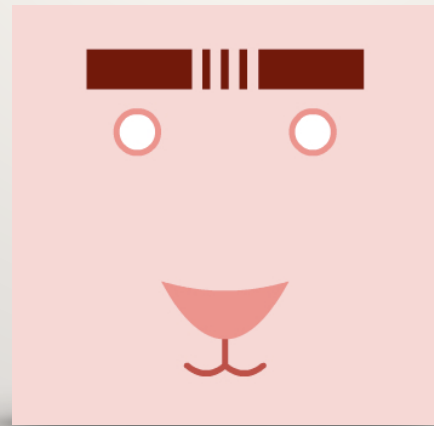
Flash developers blazed new trails, defining what it means to be indie and pursue innovative content



And directly enabled the greater industry
to move forward in colossal ways

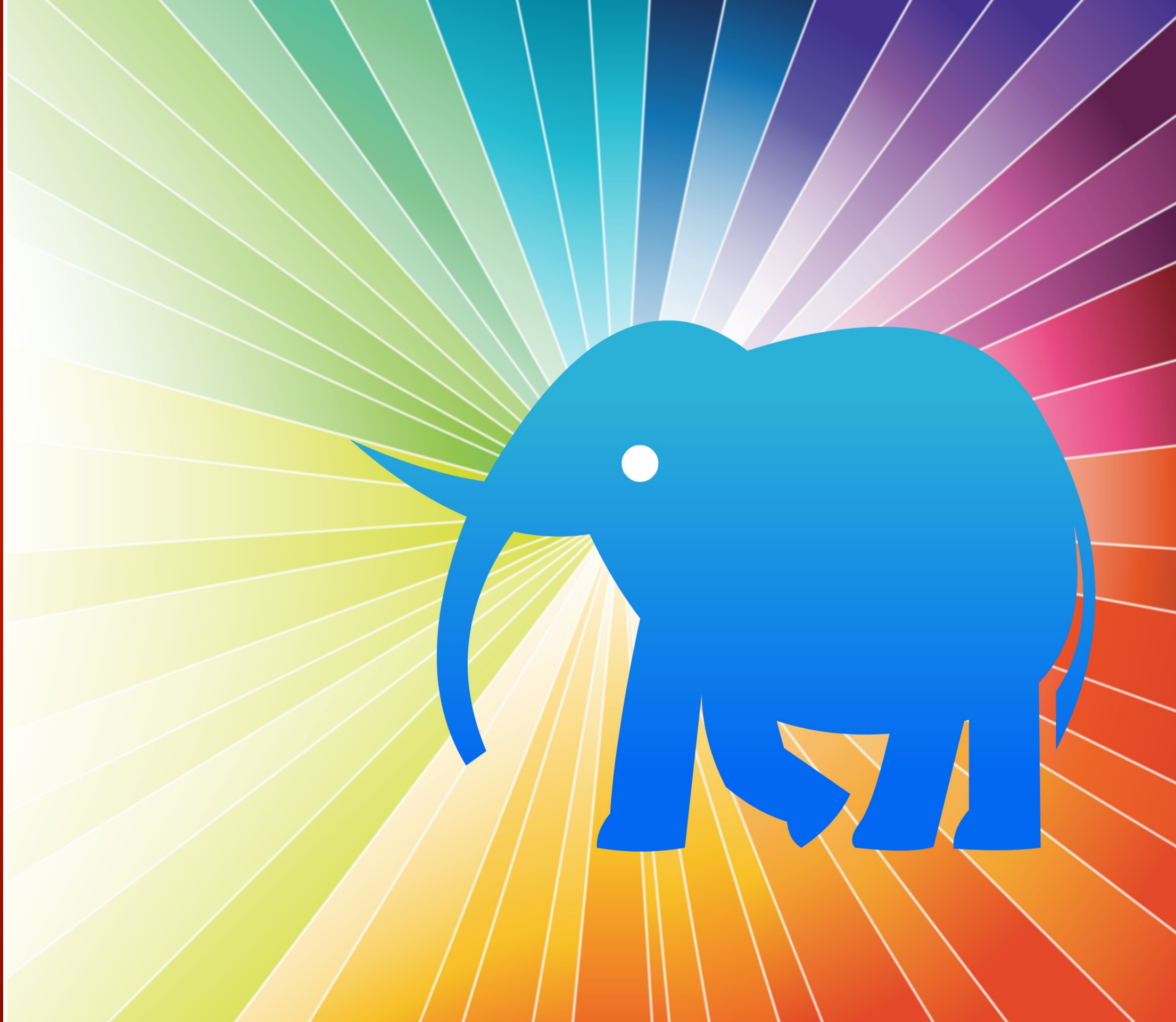


This is the story of the prototype indie,
the ubiquity of an insane technology,
and the impact of an industry unlike
any other



I am John Cooney (jmtb02)

- **15-year Flash game developer**
- **Developed over a 100 flash games,** culminating in plays into the billions... including Achievement Unlocked, This is the Only Level, Hedgehog Launch, Dark Cut, Exit Path, Corporation Inc
- **Creator of jmtb02 Studios,** my poorly named Flash games company, and **Flash Rights,** a resource for Flash developers protecting their work through copyright and fair use
- **Head of Game Development at Armor Games** for 5 years
- **Director of Launchpad and Premium Games at Kongregate** for 4 years



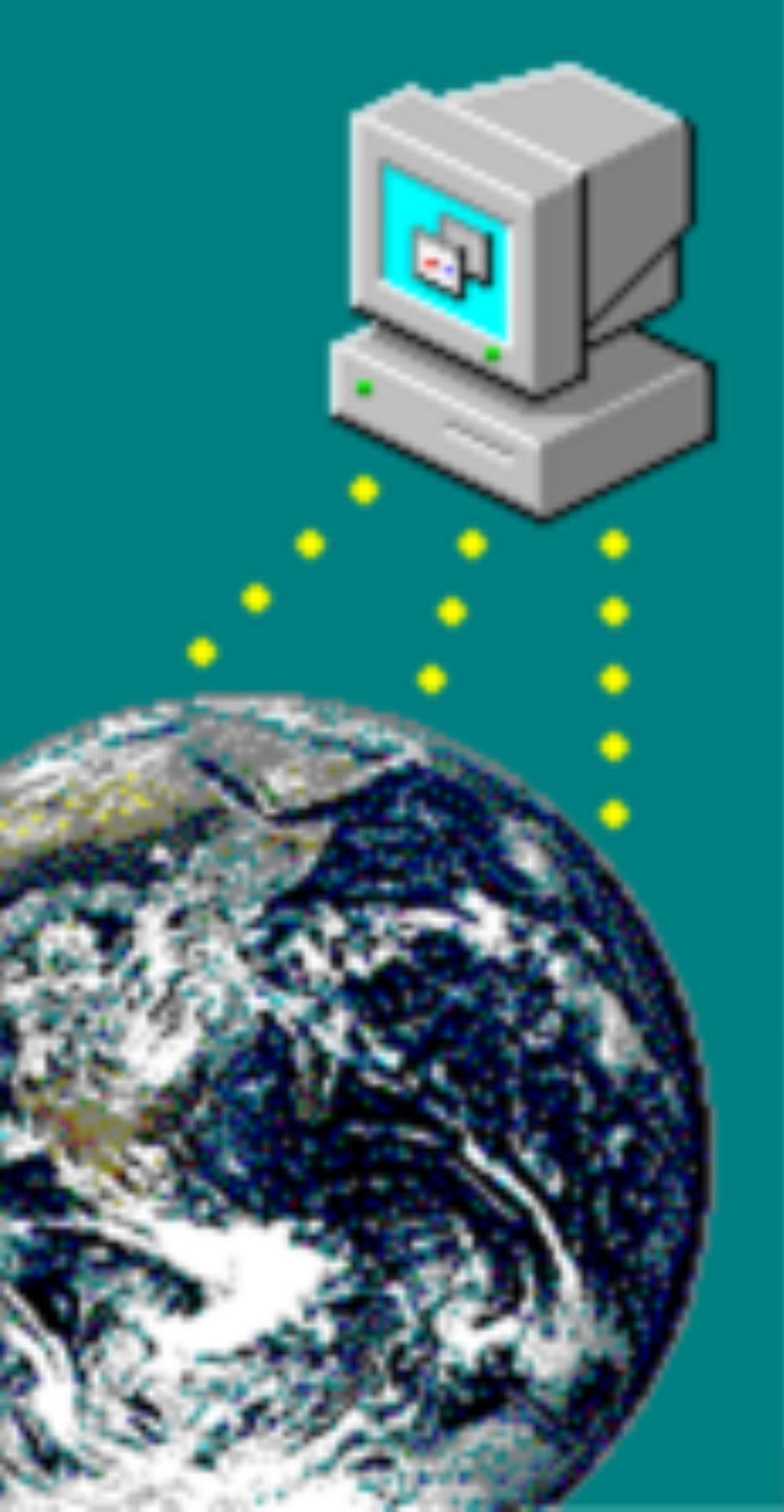
HOUSEKEEPING

- I present quickly, we've got 19-20 years to cover.
- These slides will be on developers.kongregate.com/blog sometime soon after this presentation (I'll put it on Twitter @kongregatedevs / @jmtb02 as well)
- The motivation of this talk (postmortem) isn't to say, "Flash is dead and here's why."

OK. Lets go.

1998

The Birth of Flash Technology



**~20 years ago, the internet was
slow as hell**

Back in 1998...

- America Online dominates the modem-connected internet with over 34 million subscribers. It took about 9 minutes to download a 3MB MP3. Broadband was coming but not widely adopted.
- (This is also the year Titanic won Best Picture, just for more cultural context)



...and Flash was born

- Flash jumped into web browsers in 1998, as a plugin to display rich multimedia
- Flash was **lightweight and powerful**

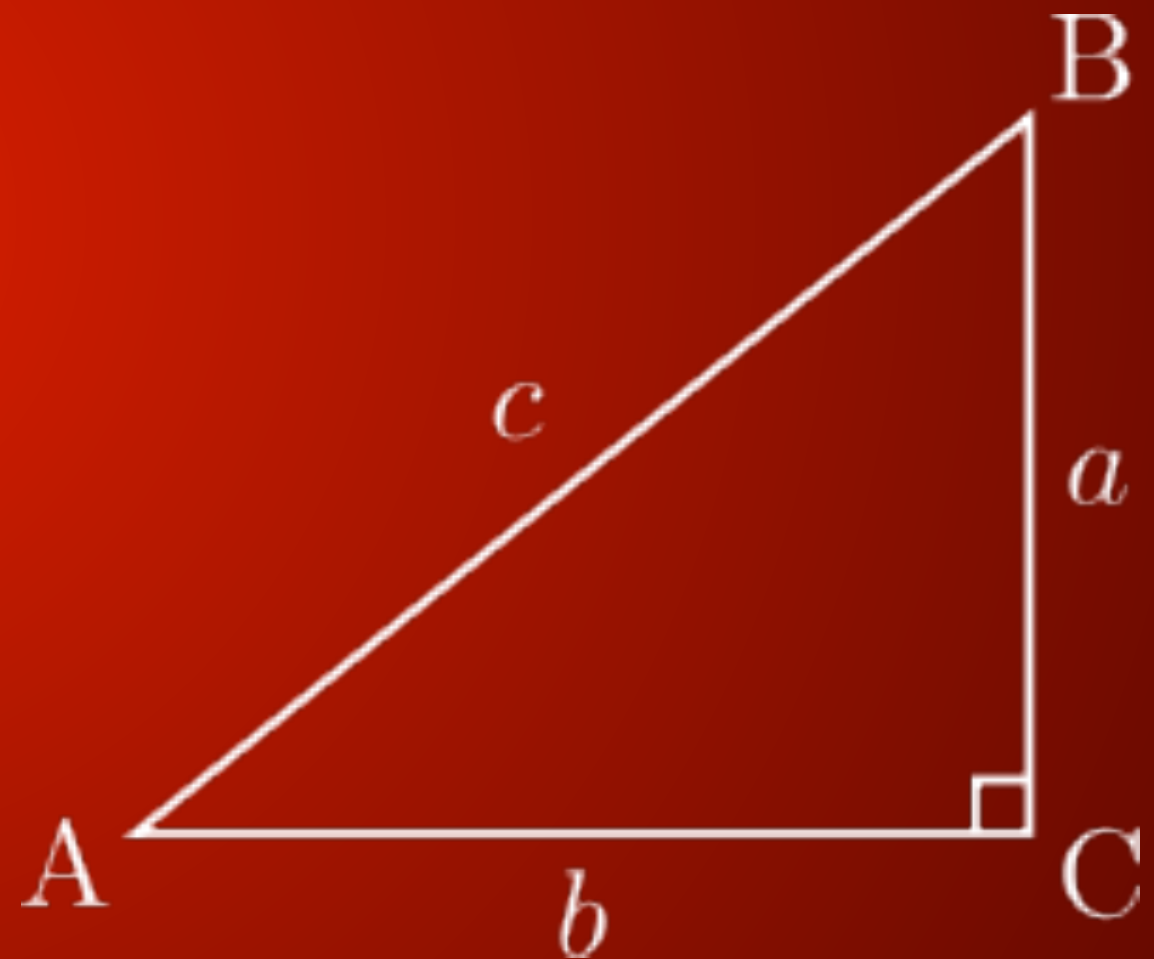


Leveraging Vector Technology

Instead of requiring the download of a heavy bitmap, Flash instead downloaded the code required to draw an image

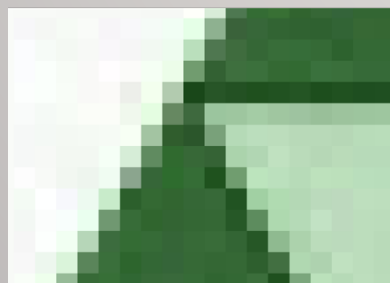
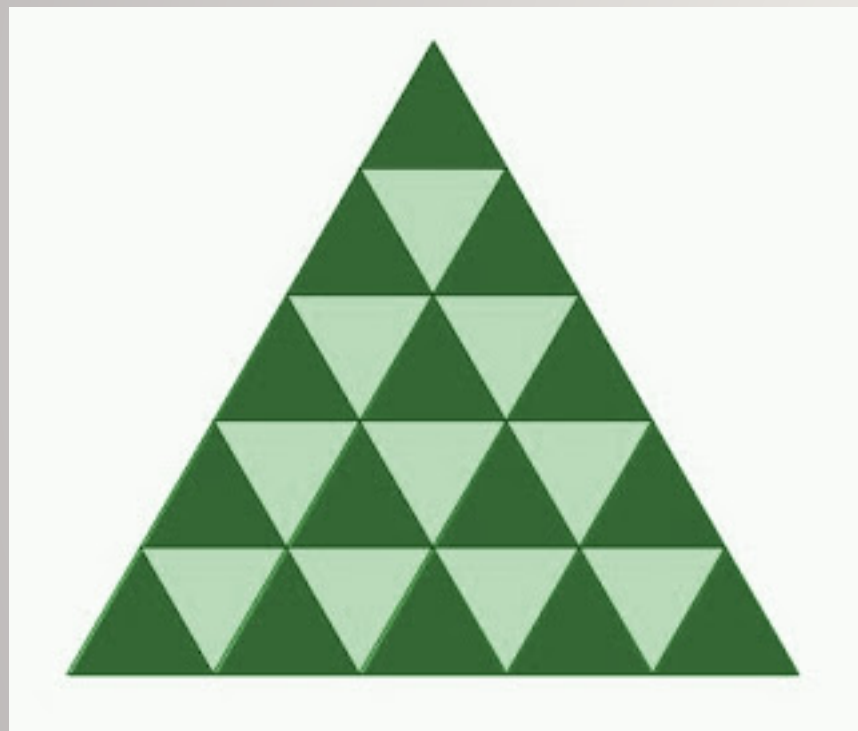
Instead of drawing a triangle with thousands of pixel coordinates and colors... Flash just sent the coordinates and let the user's computer figure out the math to draw the triangle

Instead of sending 60 frames of animation, send two frames and let the math run its course



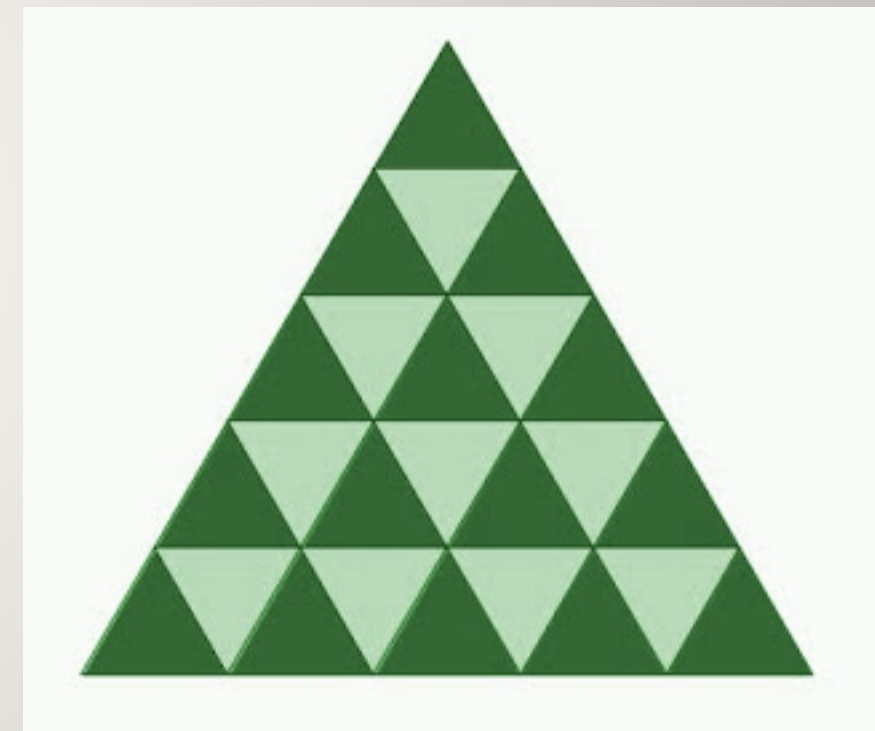
Bitmap

16 KB Download



Flash Vector

0.25KB Download



Flash came in two parts:



Flash: The paid computer software used for making Flash files (*.swf), which run using Flash Player, complete with drawing and scripting tools



Flash Player: Free browser plug-in and desktop program used to run Flash files (.swf), downloadable by anyone

Flash required downloading the browser plug-in.

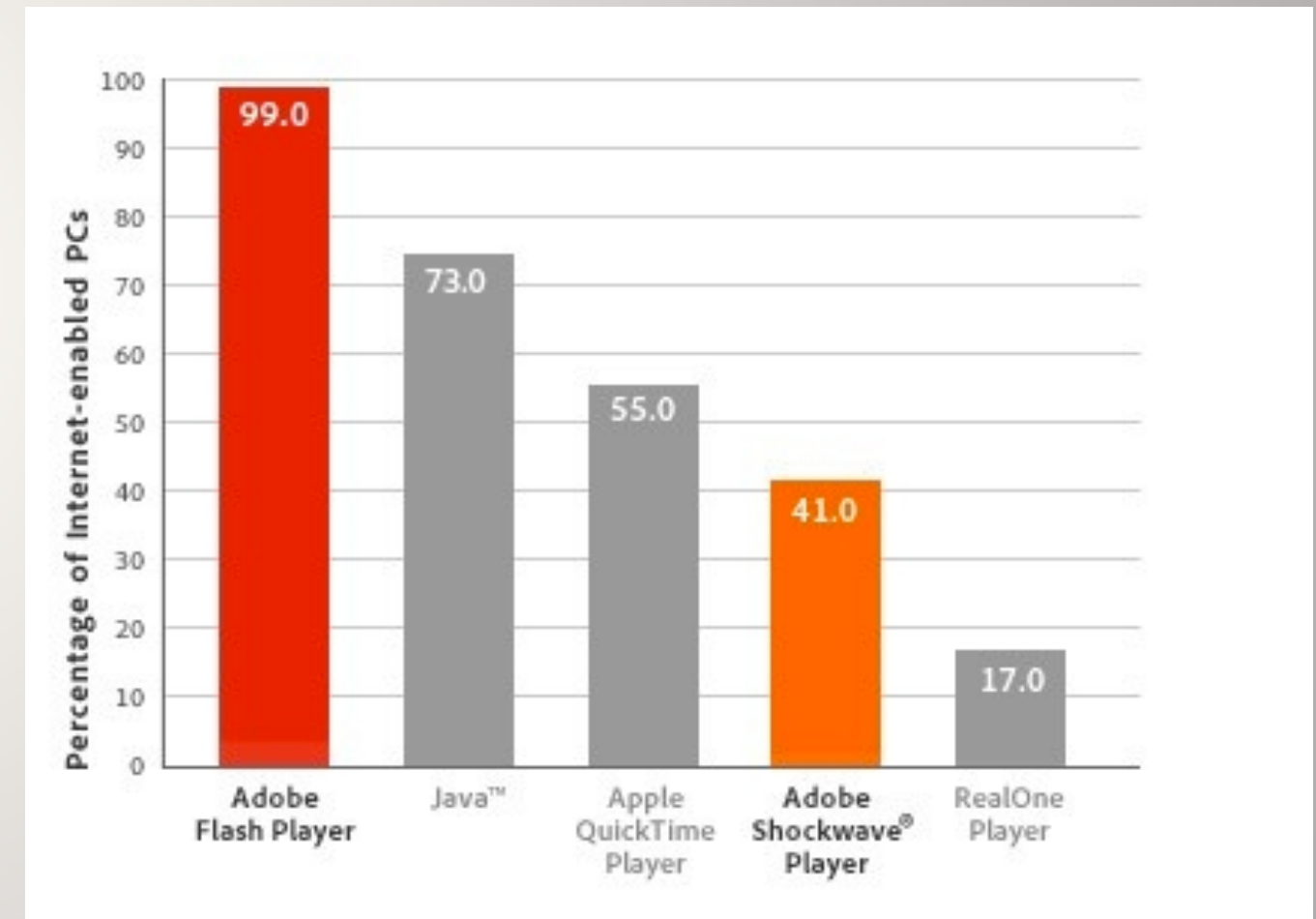
Luckily, it wasn't hard to get people to install browser plug-ins in the 90's

Remember... the late 90's was the era of browser toolbars, free emojis, and desktop buddies



99% Ubiquity

- Flash content was compelling and the plugin got a lot of downloads.
- By 2009, Flash would be installed **on over 99% of computers** connected to the internet, both Mac, PC, and (sometimes) Linux



(This chart is from Adobe in 2011)

Earliest Flash Games

- Flash was a simple animation tool in its early years, programming was mostly limited to scripting buttons to play, stop, and going to specific frames.
- The earliest Flash games were button-based experiences, such as point-and-click adventures or quizzes



In 2000, **Actionscript** arrived with Flash 5. It provided a robust set of tools to making Flash games and interactive content.

It was groundbreaking and unlocked a new powerful, super simple way of making games. **It was super easy to use.**

Veteran and novice developers could both use the language and do great things with it



Tiny file size, tiny footprint

Easy drawing/animation tools

Easy scripting language

Ubiquity and accessibility

Fast deploy

Massive, excited audience



The Holy Grail of
Game Development

Cross-platform dreams

Flash was the first widely adopted cross-platform technology for games

Export once, upload to a website. **Done.** The content just worked.

2000

Newgrounds



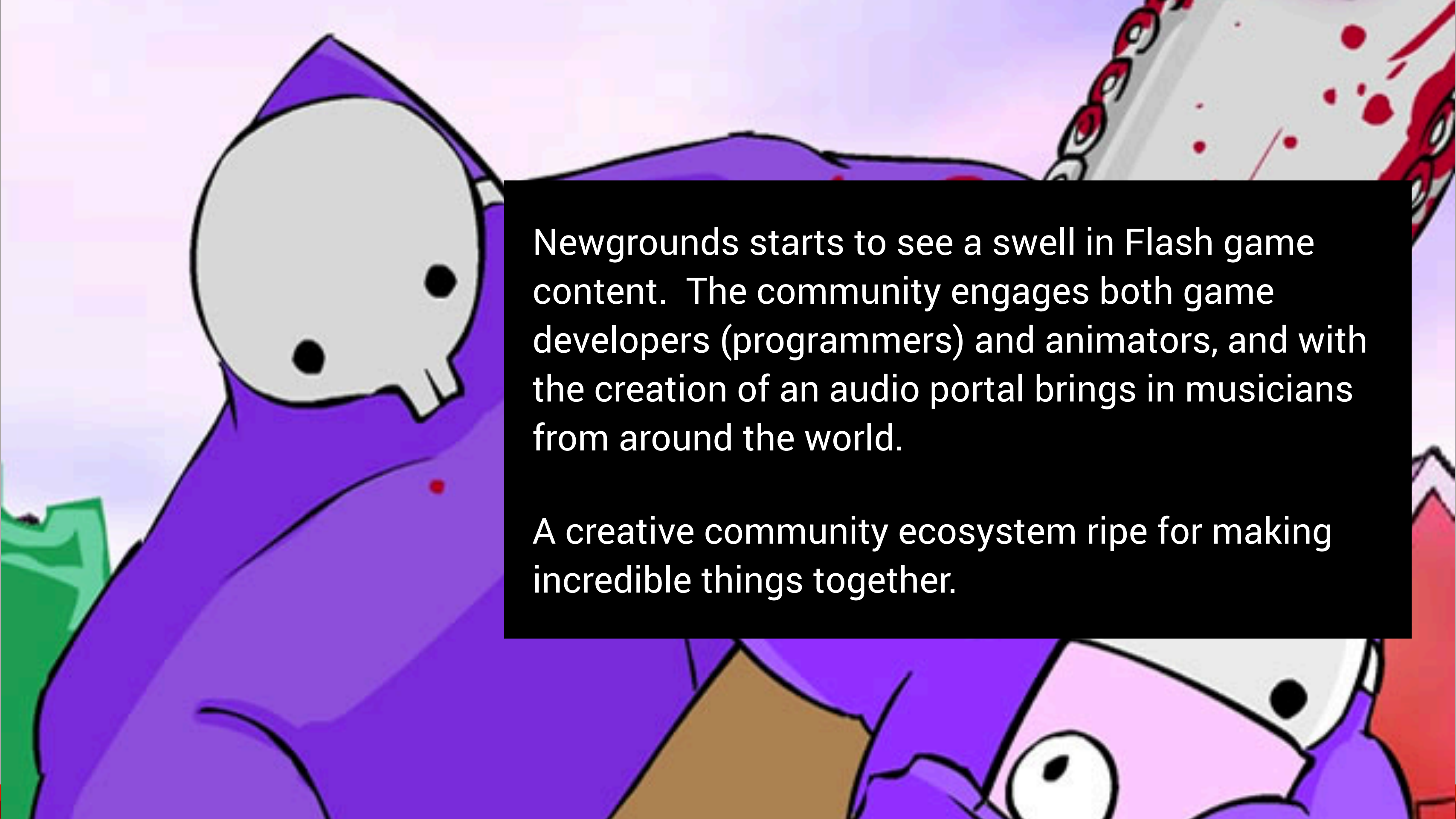
- In 2000, Tom Fulp and his website newgrounds.com opened the automated Flash portal, which accepted, processed, and published Flash content to the internet instantly.
- Newgrounds forged a path for sharing content instantly



Instant Community

- No other medium ever allowed for this kind of interaction and feedback
- Scores, reviews, rankings, forums, and a community of artists and fans
- In many ways, it was the prototype Youtube; user-submitted content



A cartoon illustration featuring a purple figure with a large, white, skull-like head and a purple body. The figure is positioned on the left side of the frame. In the background, there are green hills and a pink figure with a large, white, circular eye. The overall style is reminiscent of early 2000s internet culture.

Newgrounds starts to see a swell in Flash game content. The community engages both game developers (programmers) and animators, and with the creation of an audio portal brings in musicians from around the world.

A creative community ecosystem ripe for making incredible things together.

Collabs (short for collaborations) emerged.

For games, it was traditionally a programmer, artist, and musician working together to make a game

Development cycles were short for Flash, so programmers, artists, and musicians had opportunities to work with a lot of different developers





The Prototype Indie

Developers created what they want, worked with who they wanted, and self-directed their work

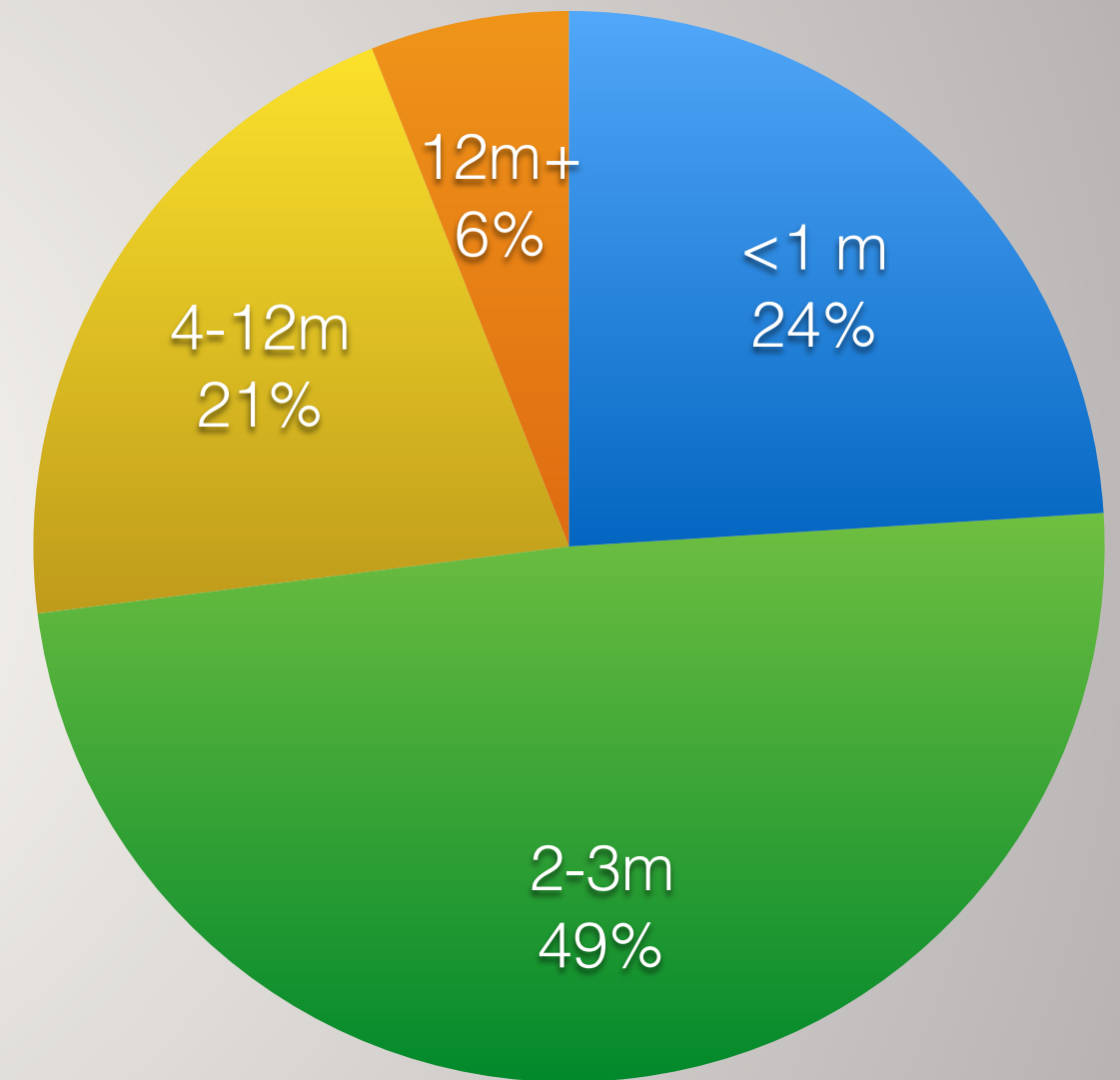
Self-publishing, building their own empires. Games get to go where they want and how they want it

Gathering a massive audience, making fans, and finding a voice in games

Developers built a lot of games, especially smaller ones

Devs kept short development cycles

In 2009, 75% of developers reported they were working on games for less than 2-3 months

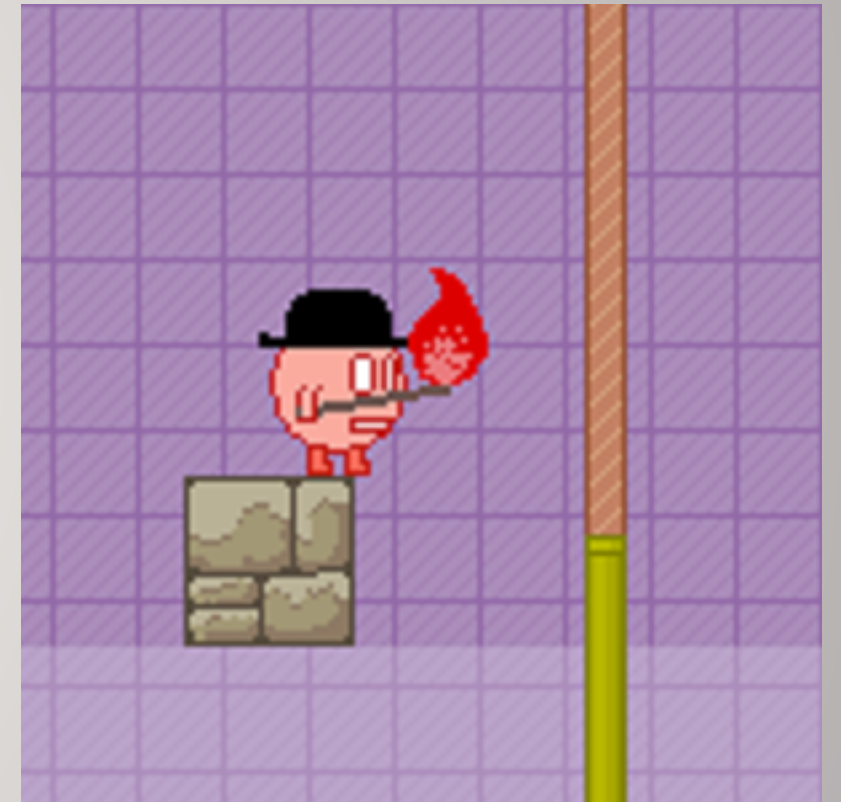


source: 2009 Mochi Media Dev Survey

But why were Flash games so small?

One of several particular reasons:

- File size had to stay small (most portals limited to about 5 MB per game)
- Flash took forever to compile large games (or just couldn't), it wasn't particularly made for large games
- Long Flash game development often got outpaced by changes in trending animation and game development
- Developers weren't making any money at all doing this... but what if they could?



2002

Getting paid making free games


Webpage Ads




- Pretty much anyone running an ad could collect revenue on it - self-serve ad providers like Google Analytics were popping up everywhere
- Early banner ads revenue rates were incredible. Think \$2 to \$10 eCPMs (~\$2-10 for every 1,000 page impressions)
- Flash game + a couple banner ads = revenue stream

Good Games = Good Traffic
Good Traffic = More Ad Views
More Ad Views = More income!


So... good games = more income?
Basically.

 **NEW GAMES**

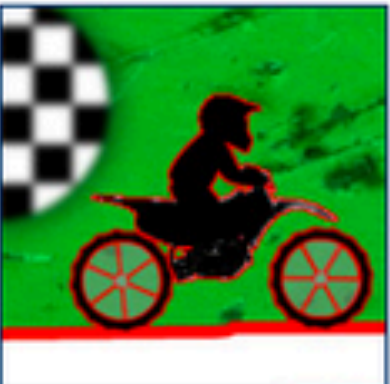
Enigmata




More zombies




Max Dirt Bike 2



BlockAde Blitz!



 **TOP GAMES**

August ▼

1. Choose Your Weapo..
2. Smileys War
3. Thing Thing Arena 2
4. Flash Trek 2
5. Learn to fly
6. Murloc RPG
7. Super Crazy Guita..
8. Boxhead 2Play Rooms
9. Battle in Megaville
10. Age of War
11. Thing Thing 4
12. Streamline -The M..
13. Feudalism
14. Portal: the flash..
15. Megaman Zero Alpha
16. Unreal Flash 2007
17. Ragdoll Laser Dodge
18. Newgrounds Rumble
19. Bowmaster Prelude
20. IncrediBots
21. Endless zombie ra..
22. The Last Stand
23. Stick Arena Lite
24. Bot Arena 3
25. Frontline defense
26. Choose Your Weapon
27. STRAW HAT SAMURAI
28. Swords and Sandal..
29. Thing-Thing Arena
30. Sift Heads 3
31. Bunny Invasion: E..
32. Super Smash Flash
33. Autumn War
34. UO:Defender
35. Sift Heads 4

Developers weren't the only ones collecting banner ad revenue

Website owners collected games across the web and put them on their own website.

Many of these collection pages were known as **game portals**

How Portals Got Content

Least popular



- **Build it:** Hire a dev team to build a game
- **License it:** Pay for a copy of the game for the site
- **Ask for it:** Ask a developer for a copy for free, in exchange for promotion/featuring (or not)
- **Steal it:** Take a game from another portal or straight from the developer's site

Most popular




Stealing games was the cheapest and easiest way to acquire games, so stealing became rampant on the web

Time to Steal

- The fastest clock-in on stolen content I had was less than **10 minutes** from self-publish
- This included the removal of a URL lock, which required the decompile and recompile of a file.
- Also, they blocked all my outgoing links to my website, to keep users on their own site
- **Why would they do this?** First person to get the game viral on their site won the Google SEO, and therefore, the money and users

Players were worried
about us, which was
amazing!

Form Submission - jmtb02 Email Form - Corporation Inc. Has Been Stolen

 **Squarespace** <no-reply@squarespace.info>

to me ▾


Name: Thomas [redacted]

Email Address: [redacted]

Subject: Corporation Inc. Has Been Stolen

[redacted]

Stolen Newgrounds Version of Grid16 ▾

 [redacted]

9/3/09


I stumbled upon a site called [redacted] that has your game grid16 at this link:
[redacted]

The game has "This copy for newgrounds <3" marked in the bottom-left. I just thought I'd inform you of this.

Josh [redacted]

A stolen game ▾

Re: Are your flash games being stolen by [redacted]

 **Tobin** [redacted]

8/18/09 ☆

to me ▾

Hi John,

I'm not entirely sure of the procedure for these things, but I ran into a direct rip of your game Compulse making it
around the web, so I thought I'd let you know. It's been retitled Magnetic Impulse.

41

Traffic and revenue was being driven to much larger websites and portals instead of the developers own webpages

So how did devs make money
on stolen games?



2005

The Birth of Sponsorships

Building a Stolen Game Economy

As a cooperative initiative, portals paid developers for branding rights

Games get stolen by other portals, which spread that branding and linked back to the sponsor



The Sponsorship

- The traditional Flash game sponsorship was an exchange of funds/promotion in exchange for logos in the main menu, loading screen, and after the game loads.
- Developers either co-brand with the sponsor or removed their logos, depending on the deal

Sponsorships were ...meager.

For retrofitting a game with logos and additional branding in 2005
I earned...

\$25!

Wow, I'm killing it! For my second game I got...

~~\$20!~~

Actually I didn't because the portal never paid
me after I delivered the branded file

This was normal. And
developers got screwed over
in a lot more ways than that.



It was bad in 2005.
And getting worse into 2006.



- Games stolen
- Payments not made
- Decompiled and recompiled code, removing logos and branding
- Ebay listings for thousands of Flash games, in a ZIP file
- Websites blocking outgoing links, so players couldn't visit developer blogs or sites
- Hostage tactics: "We'll take down your Flash game from our website for \$500."
- A feeling of "you owe us for your success" from some of the sketchy portals

2006

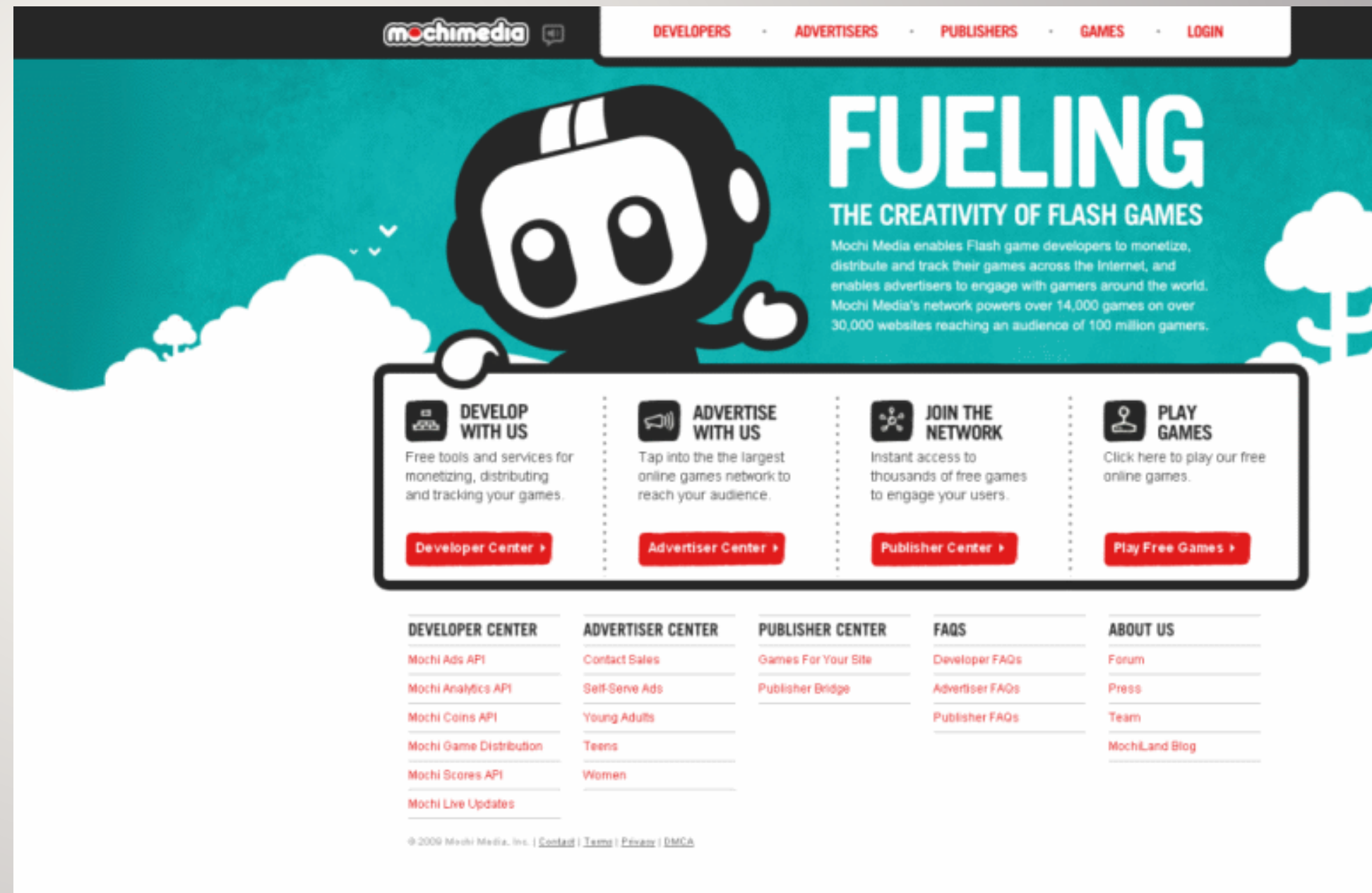
The turnaround

With Flash game developers getting treated terribly, there needed to be a champion of the developers

Three companies stepped up to help move Flash games in the right direction

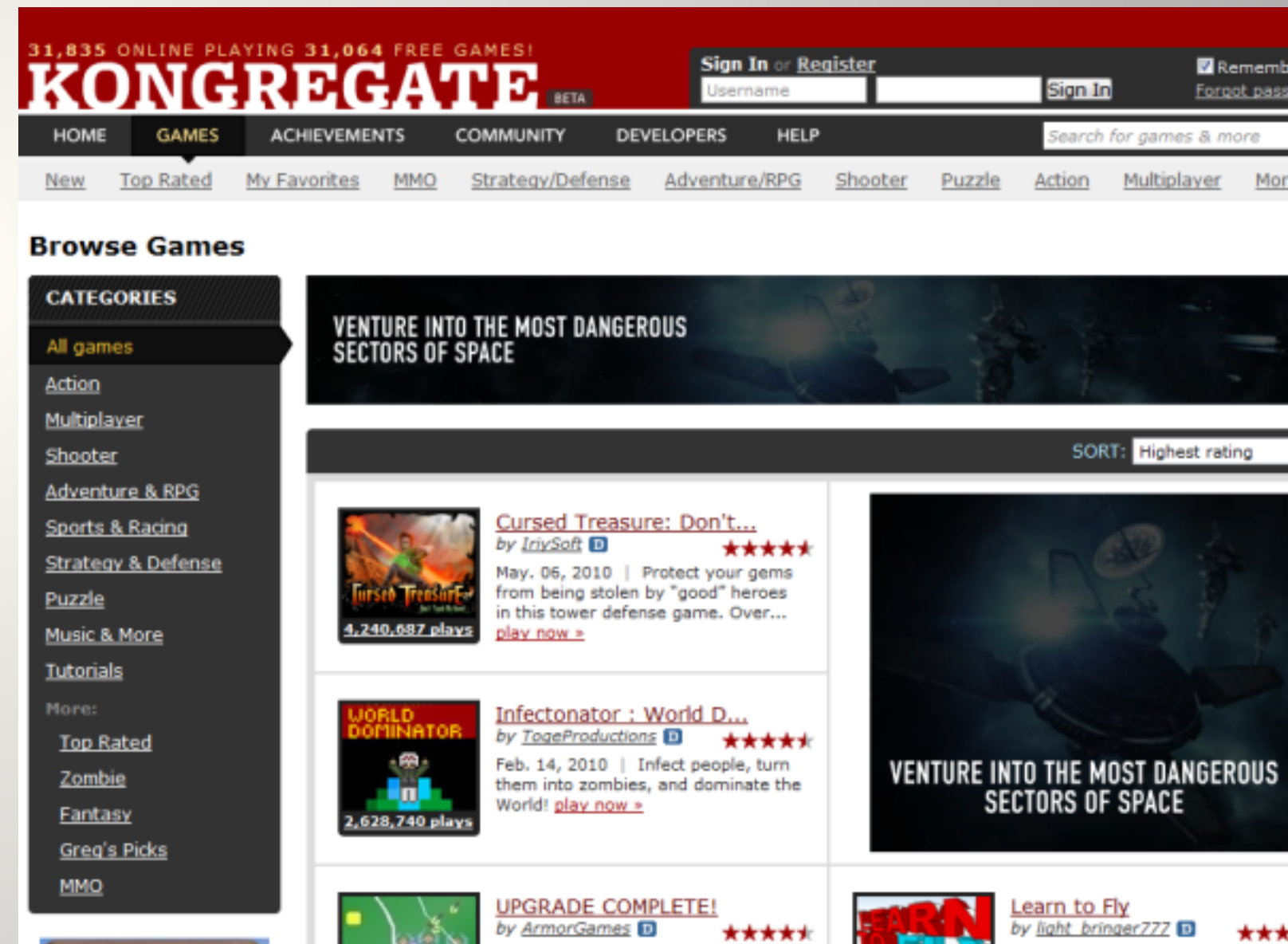
Mochi Media

- Opened in 2006 by Jameson Hsu and Bob Ippolito
- A self-service approach to in-game ads, analytics, distribution and other services
- Game developers more opportunities to earn revenue, even when their games are stolen



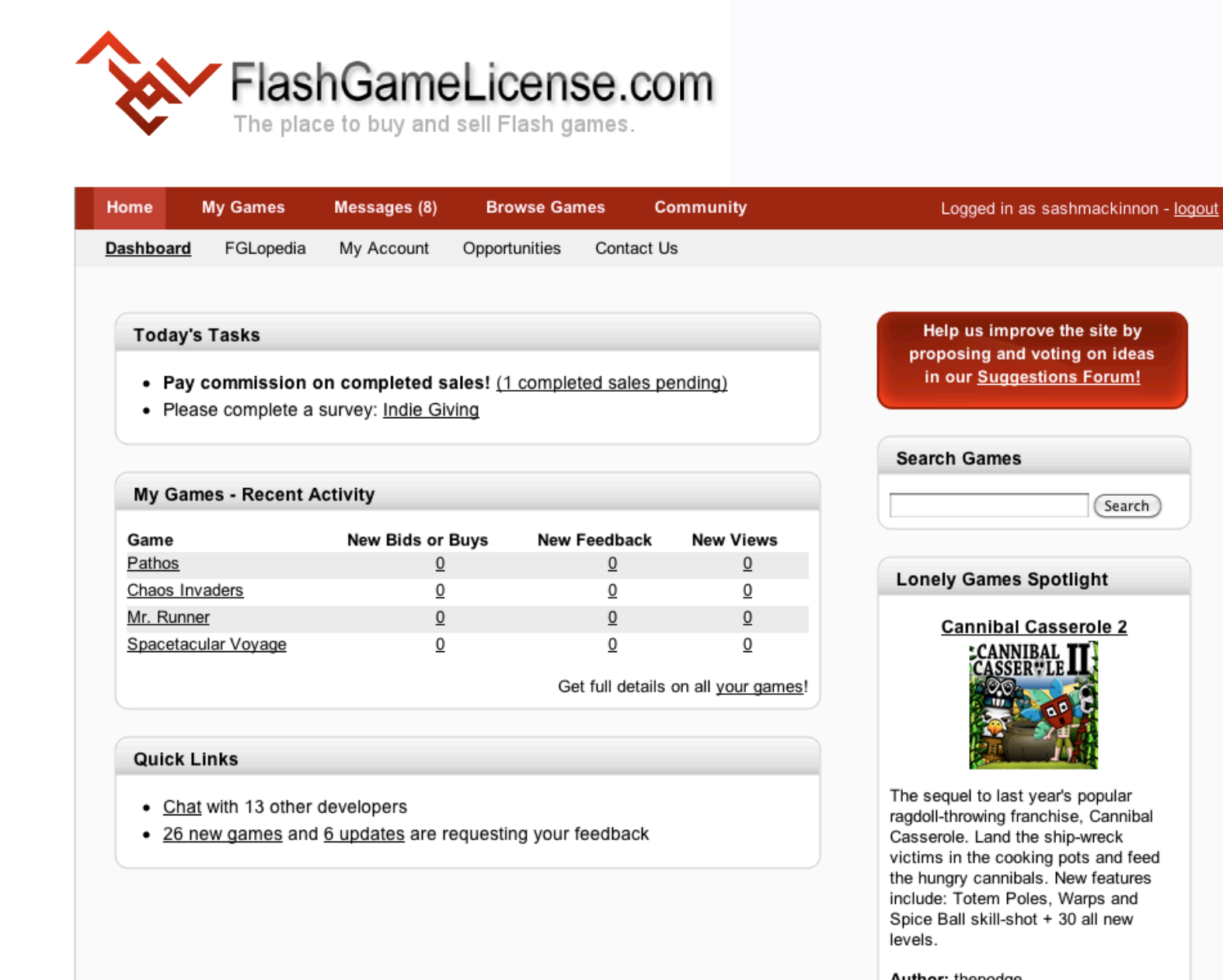
Kongregate

- Founders Jim and Emily Greer open Kongregate as a new game portal in 2006. Kongregate was a new game portal where every developer earns a revenue share of the banner ads (and later in-game purchases)
- Kongregate also introduced social features such as live chat to help grow communities around games and developers



Flash Game License

- Opened in 2007 by Adam Schroeder, a game developer who thought there was a better way for sponsors to engage with developers
- Flash Game License turned into an open marketplace connecting developers with sponsors. Instead of shady email dealing, all the transactions were out in the open. There was even competitive bidding



The screenshot shows the FlashGameLicense.com website dashboard. The header features the logo and tagline "The place to buy and sell Flash games." Below the header is a navigation bar with links: Home, My Games, Messages (8), Browse Games, Community, and a login status "Logged in as sashmackinnon - [logout](#)". A secondary navigation bar includes [Dashboard](#), [FGLopedia](#), [My Account](#), [Opportunities](#), and [Contact Us](#).

The main content area is divided into several sections:

- Today's Tasks:** A list of tasks including "Pay commission on completed sales! (1 completed sales pending)" and "Please complete a survey: [Indie Giving](#)".
- My Games - Recent Activity:** A table showing recent activity for four games: Pathos, Chaos Invaders, Mr. Runner, and Spacetacular Voyage. The table has columns for Game, New Bids or Buys, New Feedback, and New Views. All values are 0.
- Quick Links:** A list of links including "Chat with 13 other developers" and "26 new games and 6 updates are requesting your feedback".
- Search Games:** A search bar with a "Search" button.
- Lonely Games Spotlight:** A section featuring the game "Cannibal Casserole 2" by theodae. It includes a game icon and a description: "The sequel to last year's popular ragdoll-throwing franchise, Cannibal Casserole. Land the ship-wreck victims in the cooking pots and feed the hungry cannibals. New features include: Totem Poles, Warps and Spice Ball skill-shot + 30 all new levels." The author is listed as "Author: theodae".

Shifting power back to developers

- **Sponsorships begin to become competitive.** At the end of 2005, sponsorships were ~\$1,000 for the top content. By the end of 2006, sponsorships were ~\$5,000 for the top content. High quality content was always in-demand and sponsors were pit against each other on FGL and over email chains.
- **Developers reaching full-time status.** Developers started making a real living off of their games, scraping together several sources of income
- **Relationships formed between sponsors and developers** who resonated with their content and audience, often leading to better support and even multiple-game deals



New self-sustaining options became available

- Revenue shares
- Mochi Media ads and content
- Contests and competitions
- Paying out individual site licenses instead of one sponsorship

2006

The Flash Games Renaissance Begins

2005-2006 became a pivotal point for Flash games. As as a crazy collection of websites and developers turned into an industry built on sponsorships

Many new talented developers and games jump-started the Flash game movement, including:



Dad 'n' Me

- Created by Newgrounds founder Tom Fulp and artist Dan Paladin, music by Dustball



Kitten Cannon

- Dan Fleming title
- One of the earliest launch genre games to hit it big
- Became one of the most viral web games of all time, and showed the power of viral game releases





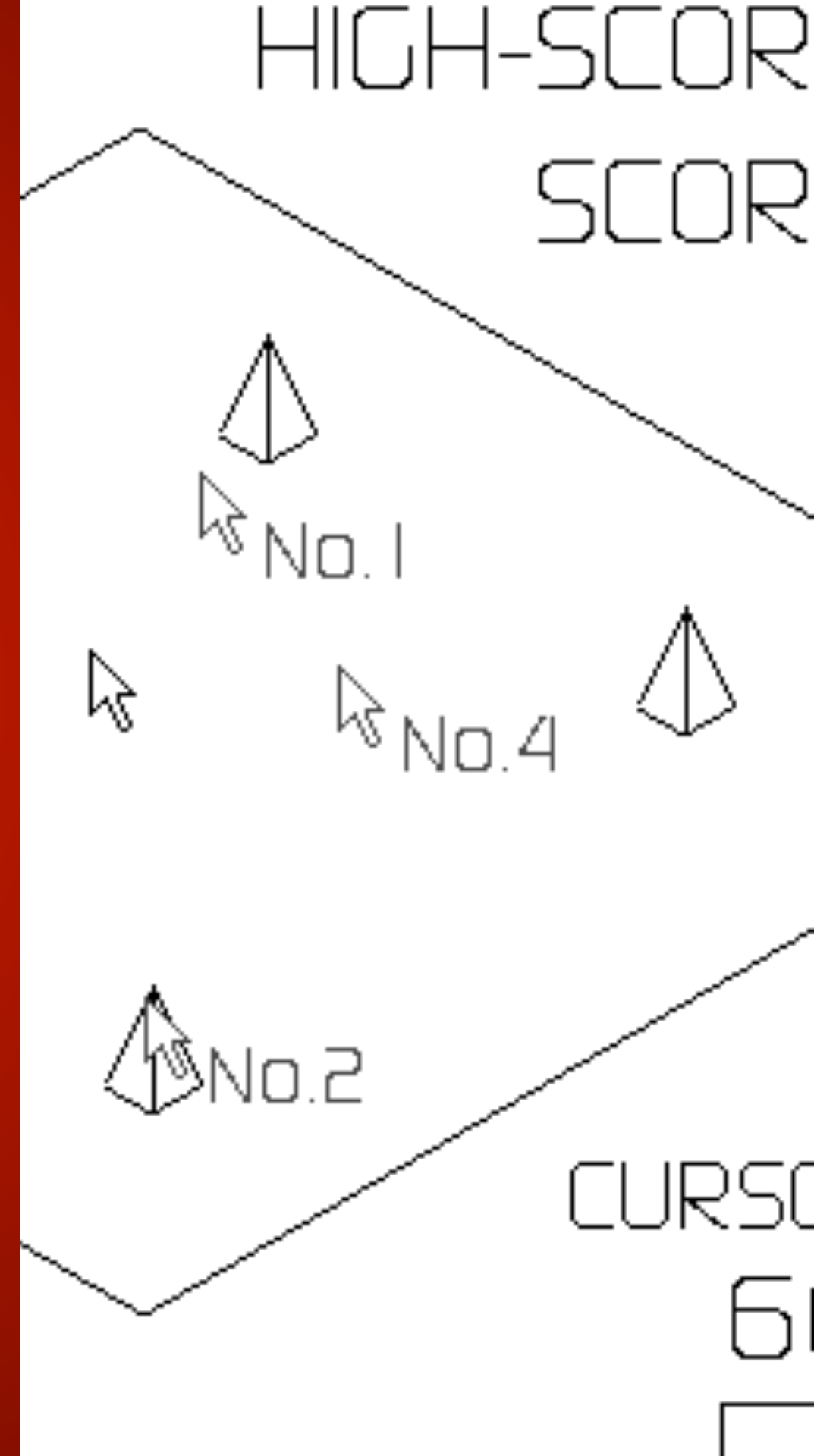
Triachind

- Created by Edmund McMillen and Florian Himsl
- One of the earliest physics-based games to hit web, and one that helped usher in the years of physics games that followed

Innovation In Flash

Under the sponsorship model, developers could be creative and build innovative content without a lot of input from the portals. Developers got free-reign to work on what they wanted.

Portals wanted innovative, polished work. Some of the best traffic coming out of Flash was from innovative titles.



Innovation iterates genres

Many genres were adopted by the Flash game community and iterated upon heavily. Flash was proving itself to be an incredibly innovation-rich community.

- Tower Defense
- Launch Games
- Defense games
- Phuzzle (Puzzle physics)
- Escape games
- Metagame/4th Wall
- Idle/Incremental/Clicker
- Social games
- IO games
- Escape Games

And developers used Flash to
benchmark success in their innovation

The background of the slide is a screenshot from the game N, N+, N++. It shows a 2D platformer environment with a light blue sky, grey ground, and various platforms. There are several yellow square coins scattered across the scene, some on the ground and some on platforms. A small character is visible on the left side of the screen, standing on a platform. The overall aesthetic is minimalist and retro.

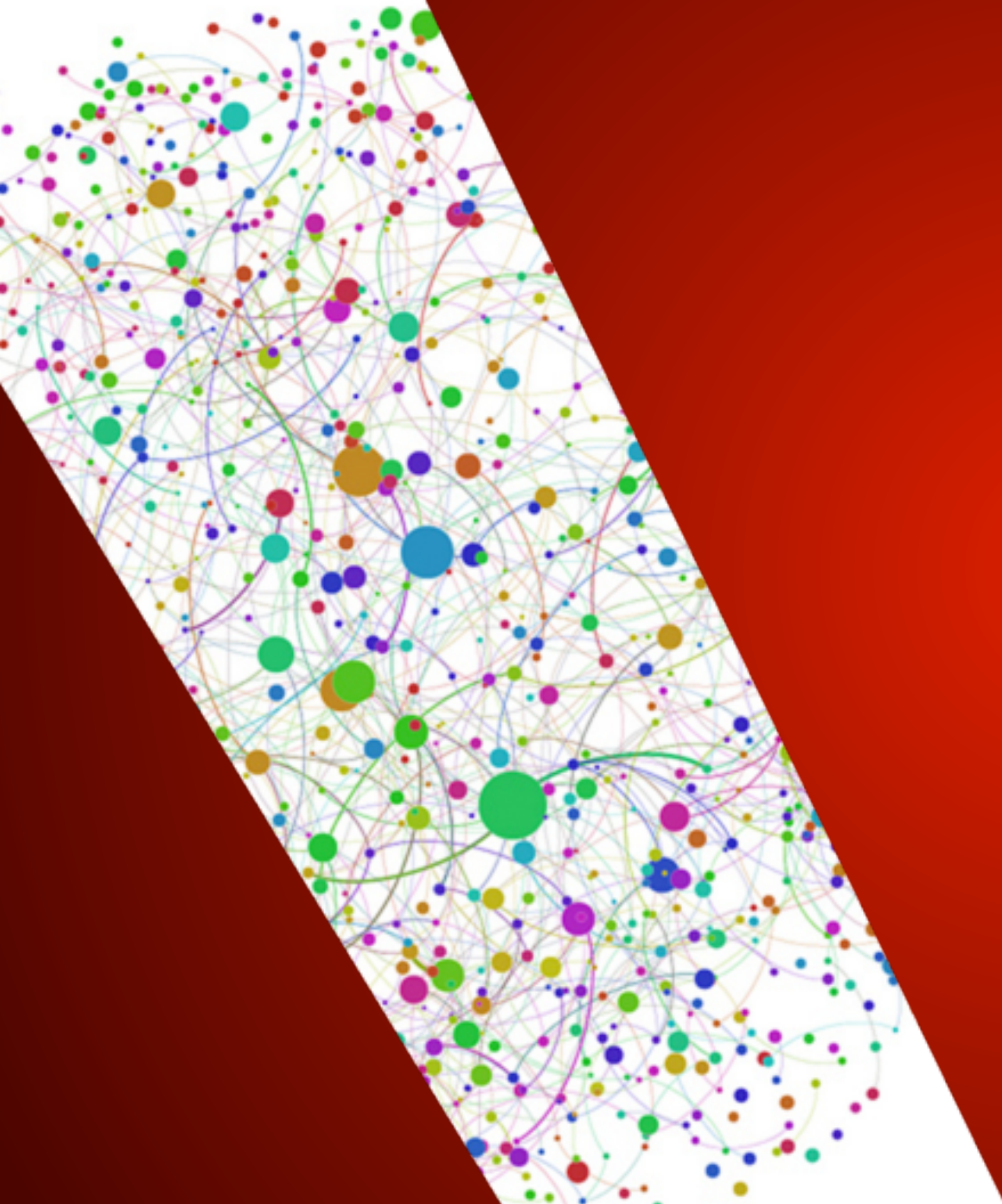
N, N+, N++

- N first created by Metanet Software in 2005 in Flash
- Went to win the IGF Audience Choice Award in 2005.
- Hit console and handhelds in 2008, as N+, critically acclaimed
- Latest version landed in 2015 as N+ + to Playstation 4, and later Steam



Super Meat Boy

- Built by Edmund McMillen and Jonathan McEntee original in Flash in 2008, released on sites like newgrounds.com.
- Only 3 weeks of development to get web version out.
- Web version was a slam dunk... millions of plays in first year
- Went on to release on PC/Mac and console



Virality

The microcosm of Flash games was becoming a mainstream phenomenon, as games became popular overnight.

“Viral” was becoming an accepted, real way of getting traffic in video games.

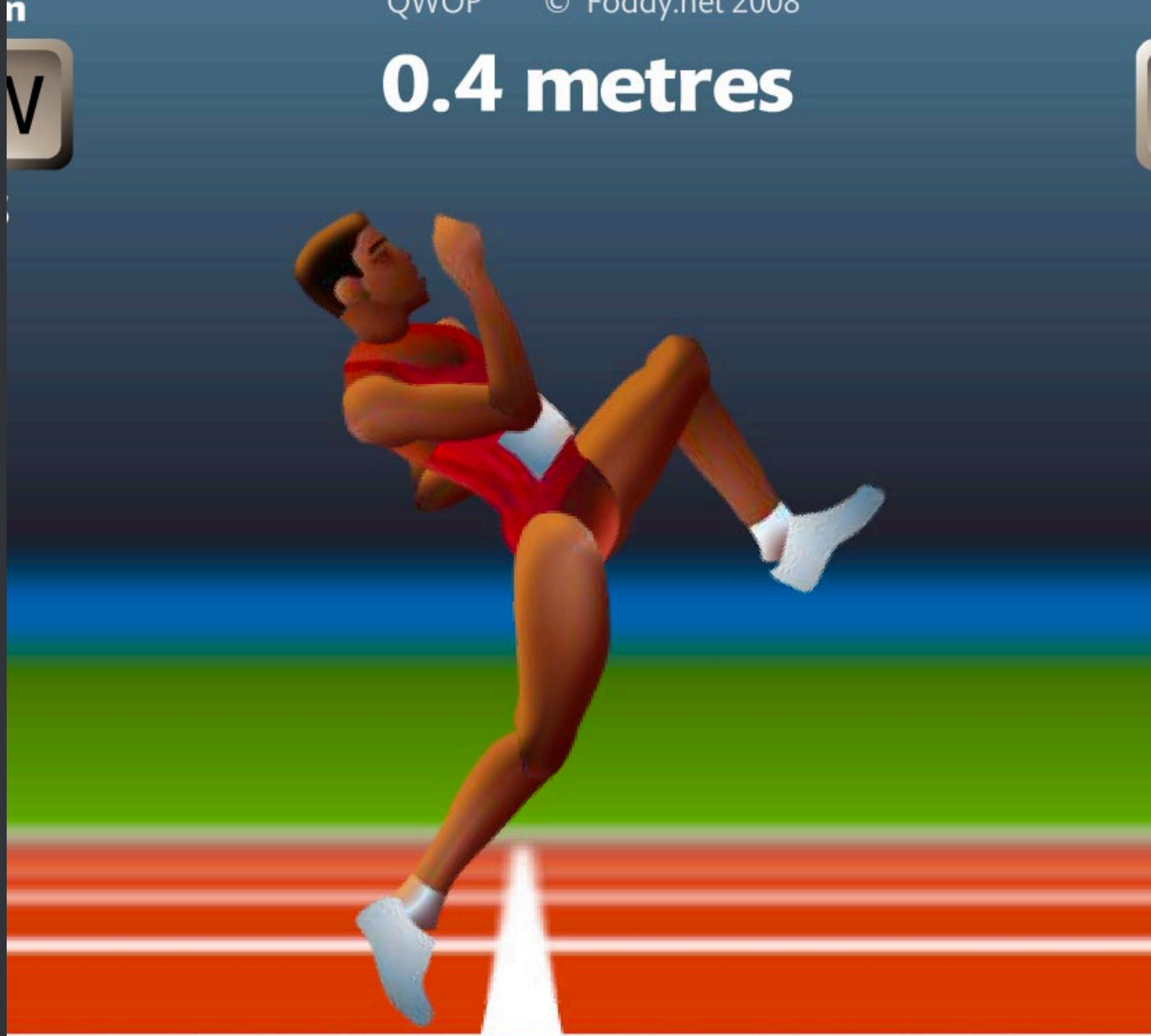
The internet hugged many Flash game web pages to death through popular content aggregators. Bandwidth bills shot through the roof but ad revenue paid it all back. Flash games were becoming huge pieces of content

The Digg logo, featuring the word "digg" in a bold, black, sans-serif font. The letters are slightly shadowed, giving it a 3D appearance.The FARK logo, featuring the word "FARK" in a bold, blue, sans-serif font. The letters have a slight gradient and a shadow effect.

Some games went extremely viral

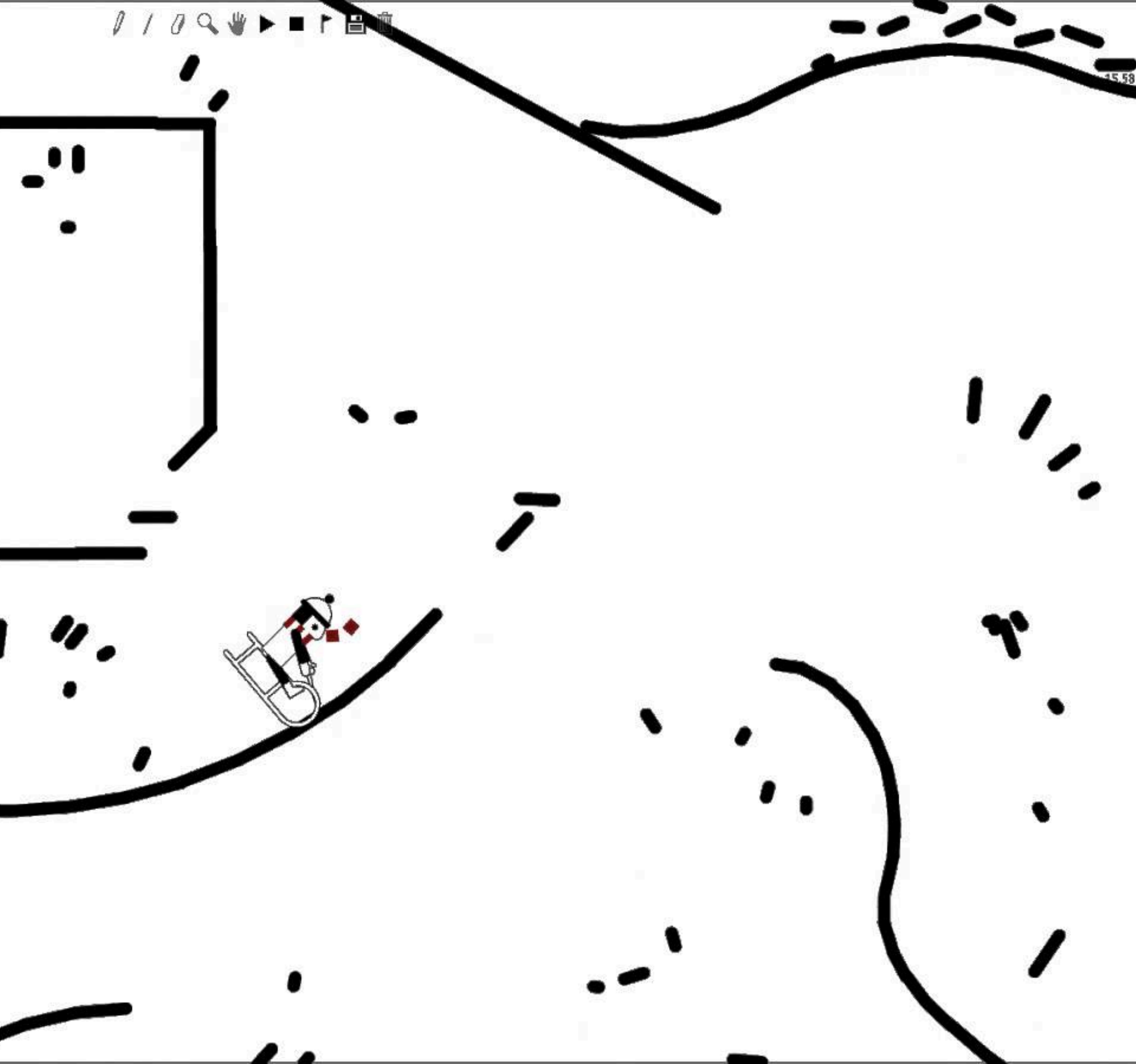
QWOP

- Created by Bennett Foddy, a bendy, joint-controlling running game, pretty much broke the internet
- Became perhaps the most well known, viral Flash games of all time
- Featured on NBC sitcom, “The Office” in 2012



And inspired the best
(and perhaps only)
Flash cosplay ever





Line Rider

- Original game by Boštjan Čadež
- Build tracks freehand and ride/share
- 1.7m videos on Youtube, and some of the most popular early Youtube videos (a new video sharing service just emerging)

2009

The Flash Community Grows

- Developer communities across the world started joined together to make Flash games
- Kirupa, Newgrounds, TIGSource and developer hosted-communities grow (developer-hosted forums were all the rage in 2007).
- Developers stay connected over chat applications. We talked over AOL Instant Messenger, MSN Messenger, IRC, forums, and email to developers across the world.



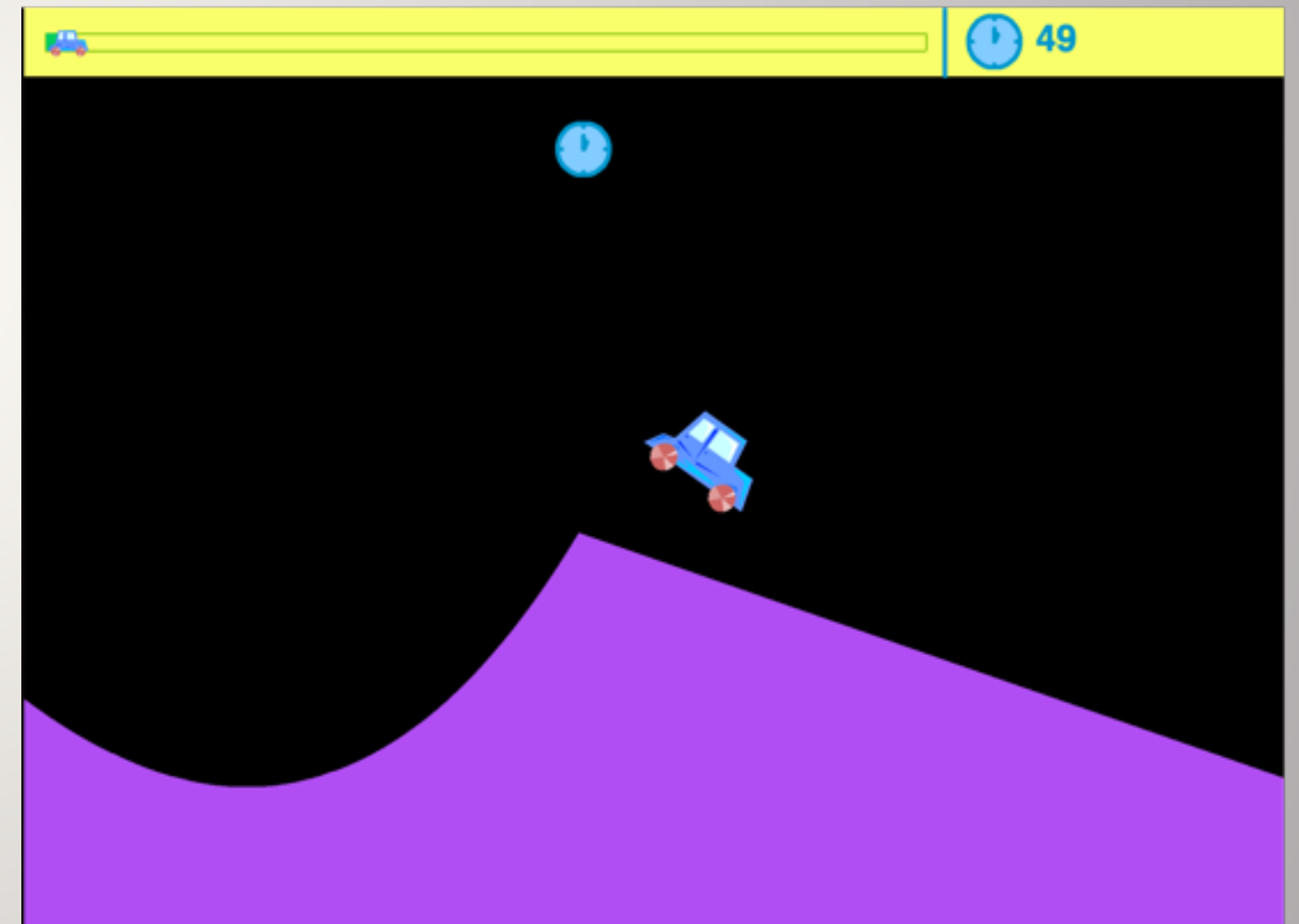
Ludum Dare community grows, Flash bringing in many of its top entries

LD	Date	Compo Dev	Game	Flash	Jam Dev	Game	Flash
19	December 2010	deepnight (Sébastien Bénard)	<i>Time Pygmy</i>	yes			
20	April 2011	deepnight (Sébastien Bénard)	<i>Appy 1000mg</i>	yes			
21	August 2011	Chevy Ray Johnston	<i>Flee Buster</i>	yes	Ian Brock Josh Schonstal Guerin McMurry	<i>Escape</i>	yes
22	December 2011	Pedro Medeiros	<i>Frostbite</i>	no	Harry Lee Jarrel Seah	<i>Midas</i>	yes
23	April 2012	Tyler Glaiel	<i>Fracuum</i>	yes	TurboDindon	<i>Inside My Radio</i>	no
24	August 2012	Nicolas Cannasse	<i>Evoland</i>	yes	X-Out	<i>LD24 X0ut</i>	no
25	December 2012	deepnight (Sébastien Bénard)	<i>Atomic Creep Spawner</i>	yes	Free Lives Games	<i>Ore Chasm</i>	no
26	April 2013	TimTipGames	<i>MONO</i>	no	Mark Foster David Fenn	<i>Leaf Me Alone</i>	yes
27	August 2013	Andrew Shouldice	<i>Probe Team</i>	no	Graeme Borland	<i>NXTWPN10</i>	no
28	December 2013	Daniël Haazen	<i>One Take</i>	no	Mark Foster David Fenn Andrew Gleeson	<i>Titan Souls</i>	yes

The Young Uprising

Younger developers were finding their footing in Flash games. Flash could let entirely new developers enter the industry and hit it big.

Tyler Glaiel (Closure, Bombernauts, Aether) created a procedurally generated terrain car driving game at age 15/16, called Krazy Kar. It reached 2m+ plays in 2005.





"I never even knew I'd fall in to the games industry at the age of 16.

Having full creative freedom to make games that anyone could play in their browser was insanely cool... without Flash I wouldn't be doing what I love."

- Chris Jeffrey, Chris Jeffs Games

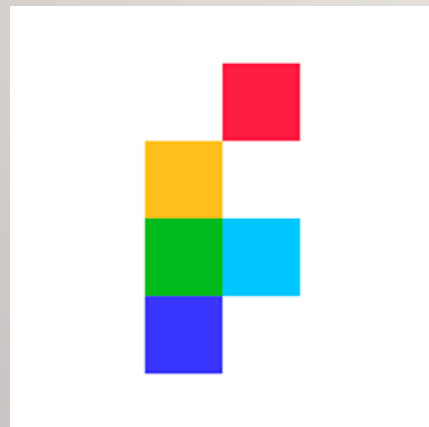
We had a developer who made irreverent, slightly minimalist games. We figured based on his humor and skill level he was 25 at the most. But his dad always signed his contracts which we thought was odd.

One day he sent us an email saying he bought his first car. We were like, "Oh wow, seems a little late to get your first car, but okay." Turns out, he was 16 and not only just bought his first car with the money he had received from licensing his flash games, but also had JUST gotten his license.

-Anya Combs, Developer Relations

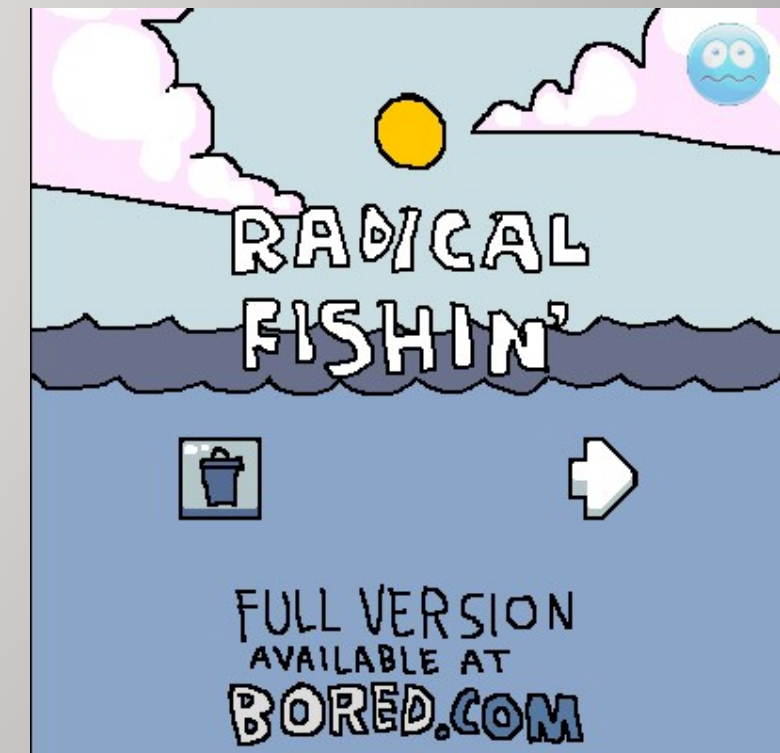
Toolsets emerge

- Several toolsets/libraries emerge to help developers create games even faster than before
- Many of the games built in these tools became prototypes for much larger, popular games



Flashpunk

- Chevy Ray Johnston's library for making Flash games super fast. Handled a lot of basic developer tasks such as timestep/delta, animation, and collision.
- Give Up Robot by Matt Thorson/Adult Swim
- Radical Fishin' (the first one) by Vlambeer
- Super Puzzle Platformer by Andrew Morrish



Flixel

- Written by Adam Saltsman and contributors between 2008-2010
- Tile Collision, cameras math/color/particles, and all the basics to get a 2D game going
- Helped become the bedrock to several top games, including IGF nominees and Ludlum Dare winners



Starling

- Built by Gamua, Leverages Flash's Molehill API (2011), a layer that allows developers to access GPU acceleration
- Incredipede by Northway Games
- Samorost 3 by Amanita Design
- Haunt the House by SFB



Flash evolves as well

- Actionscript 2 becomes Actionscript 3, providing full OOP development
- Flex SDK releases, allowing great tools like FlashDevelop and Eclipse/Flash Builder support to arrive.
- Animation and performance gets better. Flash is becoming a mature technology for games



Flash gave us a lot of robust tools, but also a bunch of really weird features and experiences

As curious, innovative developers, we naturally took advantage of it

Flash had local save objects that wouldn't reset with your browser cookies. Players didn't know this.

You Only Live Once by Raitendo set a cookie so the game would only play once. Then you could never restart the game ever again, even after clearing your cookies.



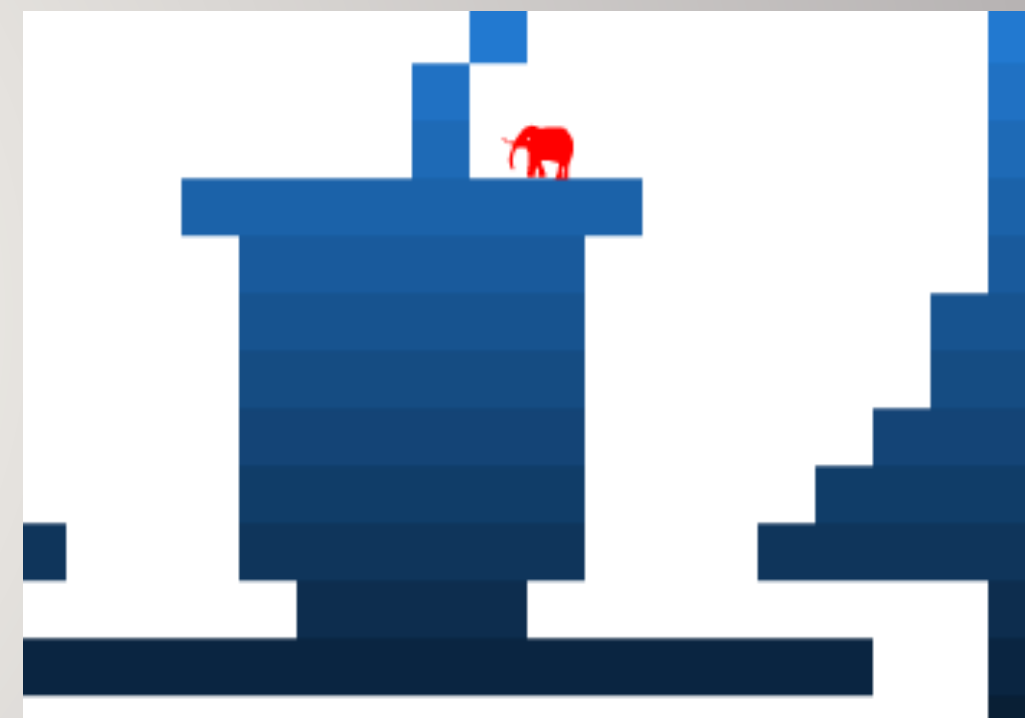
Flash files knew which website its being loaded from.

- If you were playing on a portal we didn't like, we could do things like flip the game upside-down or make it impossible to beat.
- We could specialize content to certain websites we liked to appeal to those audiences (Newgrounds characters on newgrounds.com)



**Flash files could be loaded into other Flash files.
Flash files could talk to each other.**

- We made Flash games that could be loaded within each other to create nested experiences
- We created games that required the game window to be open several times, each game window interacting with each other.
- Achievement Unlocked 2 had secret achievements found only when a second browser window was opened.



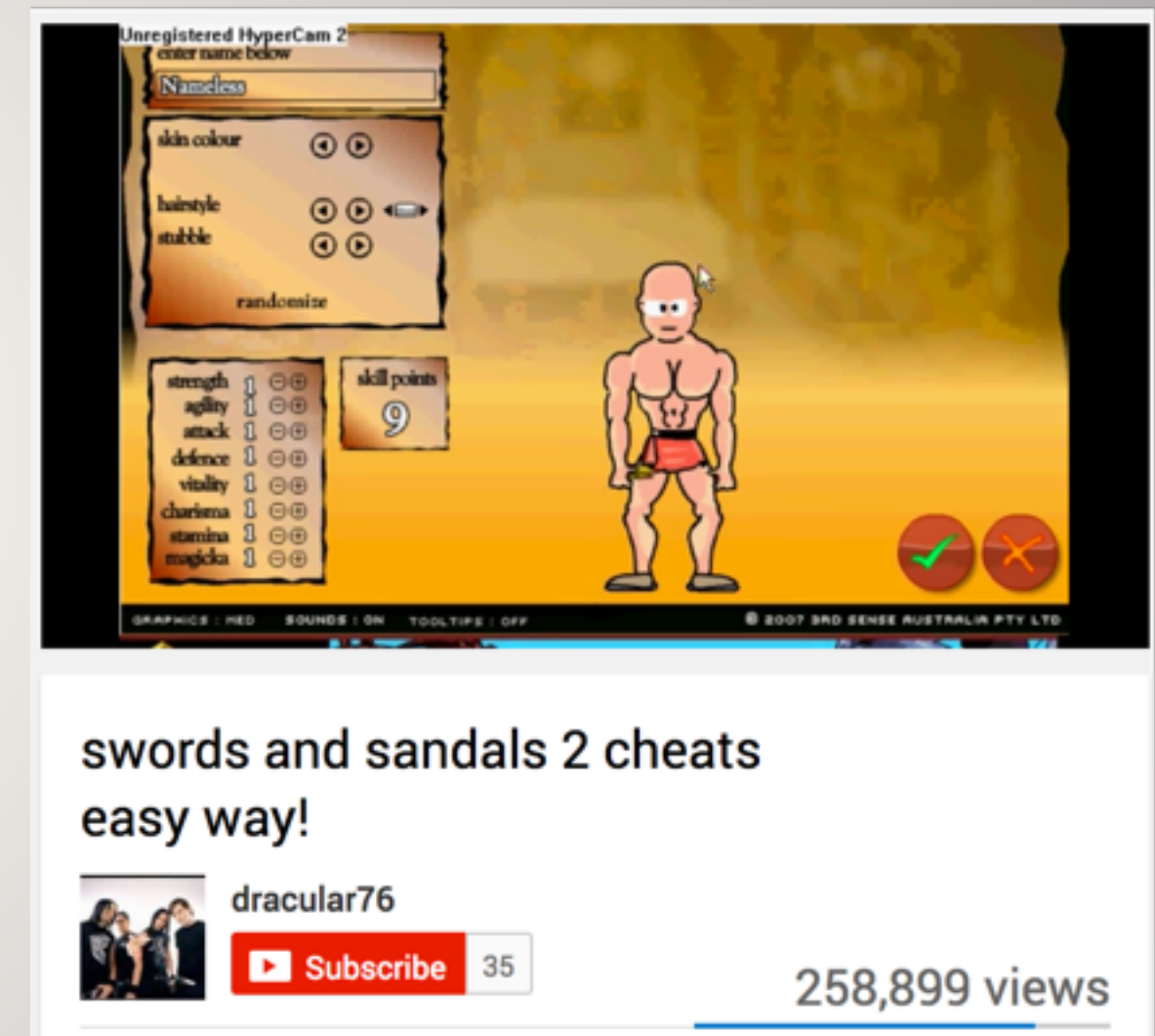
Flash was supported by the Nintendo Wii's Opera browser, so we made our first console experiences

- It wasn't an amazing experience, but it was an incredibly easy way for an amateur game developer to make a game and play it with a controller on a television... something we could only dream about back in 2011
- Flash portals made for Nintendo Wii emerged



Players mistook our bugs as features

- Oliver Joyce, developer of Swords and Sandals, noted that players hacked the game by injecting commas in their hero's name. Using the "Comma hack," (which many players thought was a feature) to pretty much rewrite and modify a save file, contributing to its virality via Youtube hacking videos



Flash had weird features, but also let us be weird ourselves.

Flash was the perfect place for weird games.



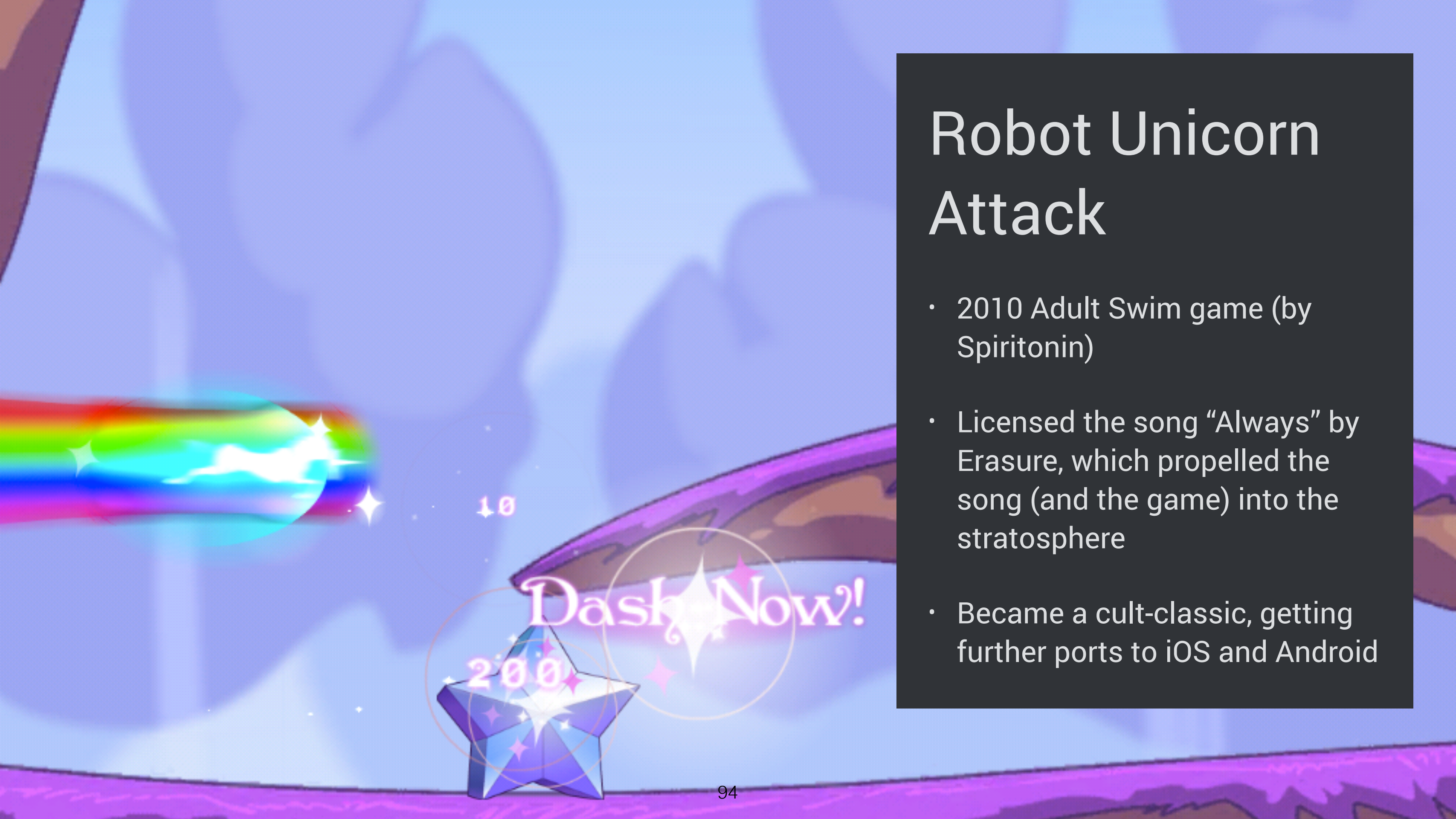
You just shit your pants! Game over!

Don't Shit Your Pants

- Text-based adventure by Cellar Door Games about trying not to shit your pants
- Team went on to make Rogue Legacy just 3 years later. You can see portraits of the protagonist from Don't Shit Your Pants in Rogue Legacy having on the walls of the castle

Robot Unicorn Attack

- 2010 Adult Swim game (by Spiritonin)
- Licensed the song “Always” by Erasure, which propelled the song (and the game) into the stratosphere
- Became a cult-classic, getting further ports to iOS and Android



Achievement Unlocked

- Game series by jmtb02 (that's me), a game about collecting 500 achievements by just doing anything, including feeding a tyrannical guinea pig stuck in a hamster tube food pellets you buy from a vending machine

You know the rules. No talking to me without bringing some pellets.

Press ↓ to continue

6

Click the elephant

193 More is better

Start scrolling

194 Still more is better

Scroll 50% of the list

195 All is best

Scroll the entire list

196 Losing focus

Click off the game window

197 Refocused Your Efforts

Click on window after clicking off

198 Right Click Follies

199 Royale with cheese

Royale with cheese

200 Hamsternator

201 Hamsternator - 5x

202 Hamsternator - 10x

203 Hamsternator - 20x

204 Hamsternator - 50x

205 Hamsternator - 100x

206 Hamster instadeath

207 Pyrohamstermanic

208 Pyrohamstermanic - 10



All



In Progress



Near You

2009

The Flash Game Industry Grows

- Flash continued its insane trajectory. By 2009-2010, many Flash portals were in the top 1,000 websites on the internet
- Popular releases were being played over a million times in the first 24 hours
- Mochi Media serving over 40,000 publishing channels, there were a TON of tiny Flash game sites! Hosts the first Flash Game Summit, a conference specifically for Flash Games before GDC



2009 Alexa Ranks

Miniclip: #252 worldwide, ~130m sessions /mo

Addicting Games: #373 worldwide, ~66m sessions /mo

Newgrounds: #724 worldwide, ~31m sessions /mo

Armor Games: #726 worldwide, ~31m sessions /mo

Kongregate: #1,009 worldwide, ~22m sessions /mo

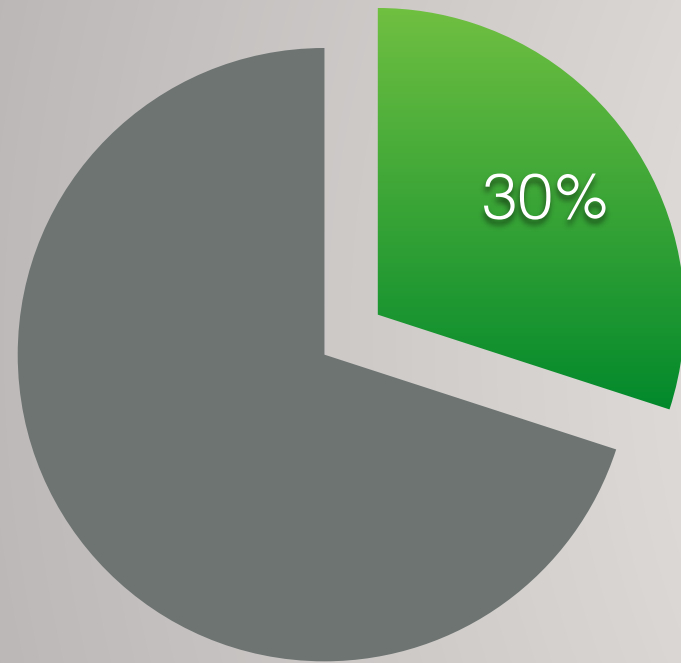
New Models for Making Money

- Site Locks: Get paid to have a copy of your game on one particular website.
- Sponsorships with Bonuses: Bonuses for when games overperform
- In-game preroll/interstitial ads: Ads become available to developers
- Microtransactions: Selling small bits of content in game, usually worked best for the larger games.

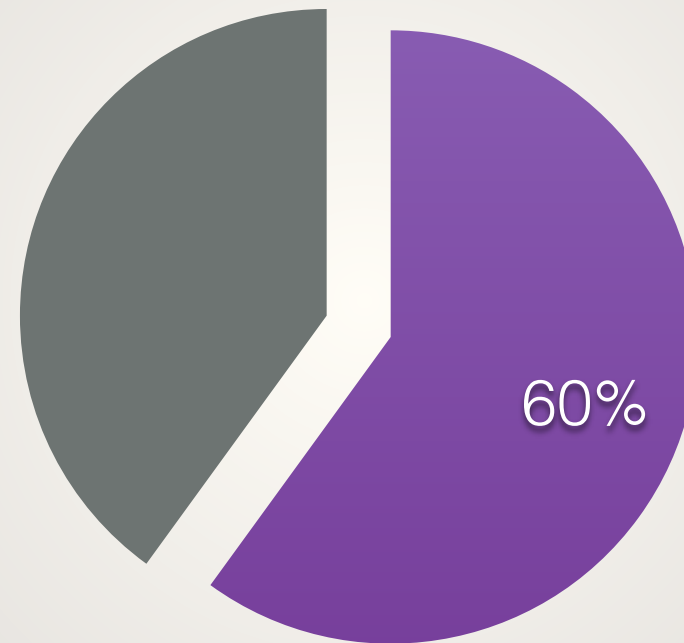
Peak Sponsorship

- By 2010, sponsorship prices soared upwards of \$100,000 for a single Flash title.
- Sponsorship deals were getting complex, with developers securing rights to future title funding as well as mobile versions

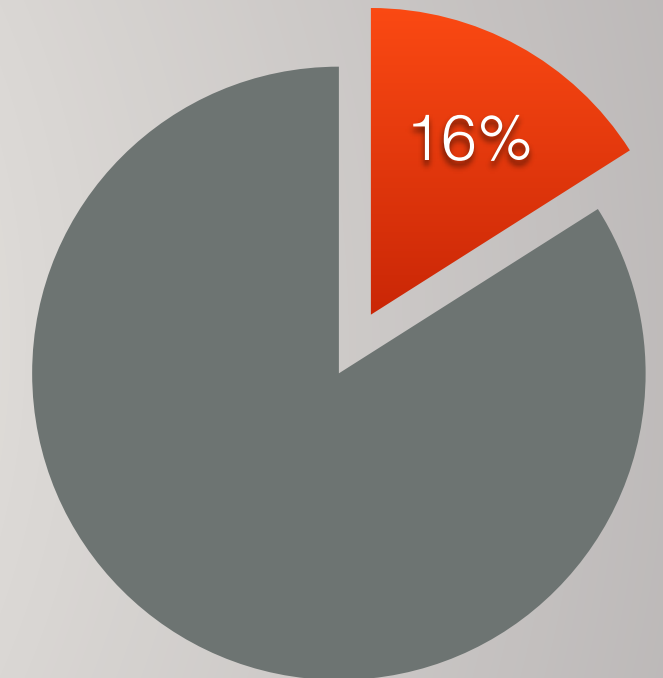
2009 Flash Game Market Survey



30% of developers using
Flash Games as a full-
time job



60% of developers
working by
themselves

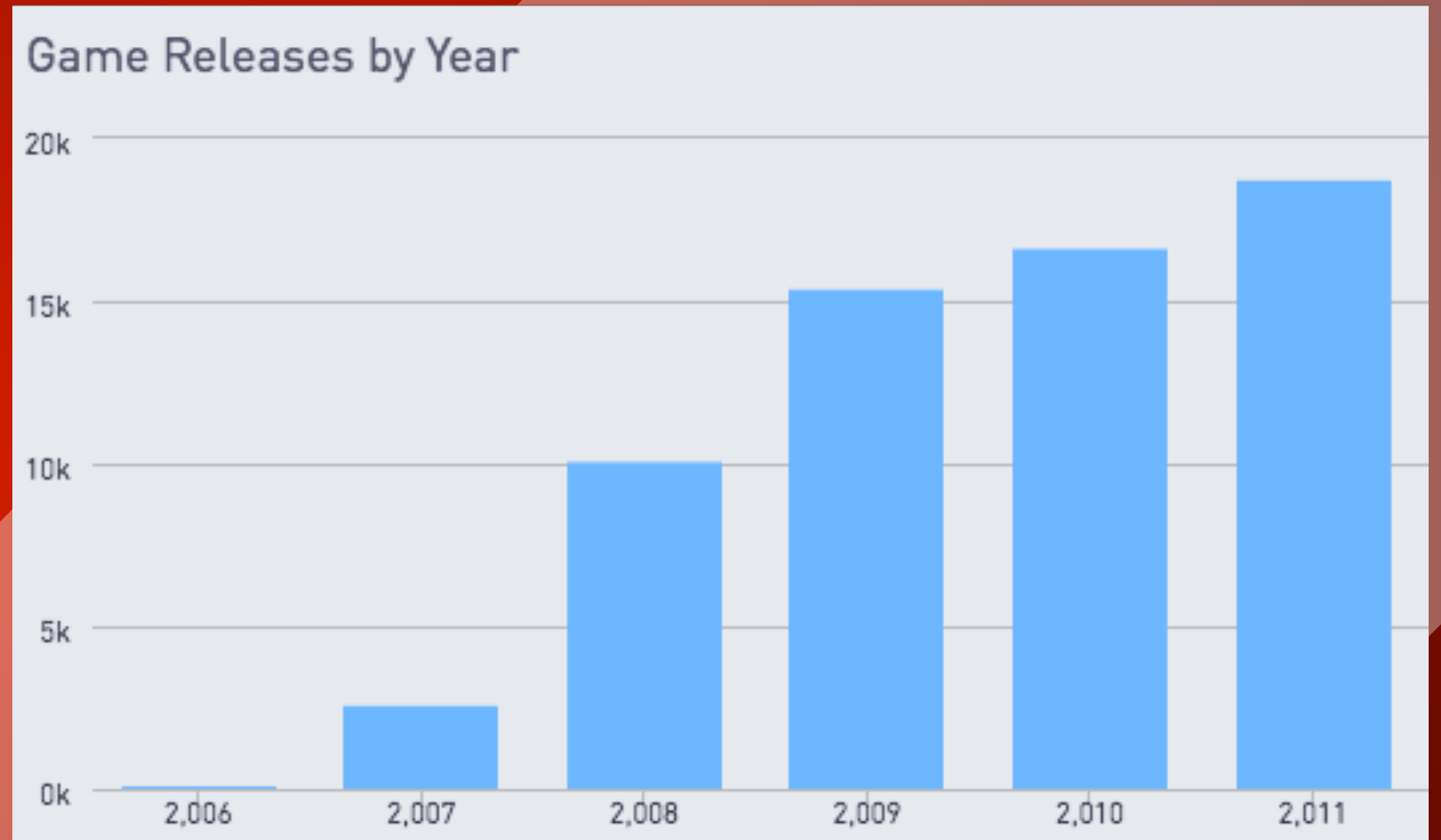


16% of all developers
making more than
\$1,000 a month

Flash Rising

2011: 18,704 games released on kongregate.com in one year

Averaging 50 games a day, a game nearly every 30 minutes being uploaded by a developer



Unique game releases on kongregate.com

Social Games

- The Facebook games big bang starts a gold rush, and many larger companies exploded onto the scene
- Suddenly, the age of “microtransactions” begins, through more casual, social games and MMO/RPG's





Farmville - 2009

- Reached \$1b in revenue by 2013
- Probably safe to say, the highest grossing Flash game ever




Candy Crush Saga - 2012

- Flash game/Facebook/king.com release first, went onto mobile and hit it huge. Cross-play with Facebook login.
- Reached \$1.04b in revenue in 2013, \$1.33b in revenue in 2014

MMOs and RPG's: The East Meets West

- Infinite Hero
- Dawn of the Dragons
- Wartune
- Rise of Mythos
- Forge of Gods



- 
- The background of the slide is a screenshot from the game StarCraft 2. It shows a top-down view of a battle on a dark, industrial map. On the left, there is a large, complex structure, likely a Pylon or a similar building, with various units and structures around it. The scene is filled with units, including what looks like Marines and Ghouls, engaged in combat. The lighting is dark with some blue and orange highlights from the units and structures.
- Autodesk's Scaleform creates a pathway for developers to leverage Flash in AAA games, especially for UI
 - A ton of games used it. Borderlands, Elder Scrolls: Skyrim, Super Street Fighter IV, Starcraft 2, Dragon Age 2, GTA V, XCOM 2





The Emergence of Reactive Content

The popularity of Flash games drove intense internet virality and even television news coverage, especially around controversial titles

- V-Tech rampage
- Cooking Mama: Mama Kills Animals
- SmuggleTruck



The Flash Game Art Scene Evolves

- Built on the support of animators and artists on places like Newgrounds and DeviantArt, Flash had a lot of great artists to work with
- Flash game artists defined and sculpted an aesthetic that carried onward into future platforms, setting a high bar for quality





Dan Paladin

Alien Hominid, Dad 'n' Me

Nitrome

Skywire, Rust Bucket, Vault



Amanita Design

Samorost, Machinarium



Jim

Sushi Cat, Never Give Up





Terry Cavanagh

Hexagon, VVVVVV, Don't Look Back

Orisinal/Ferry Halim

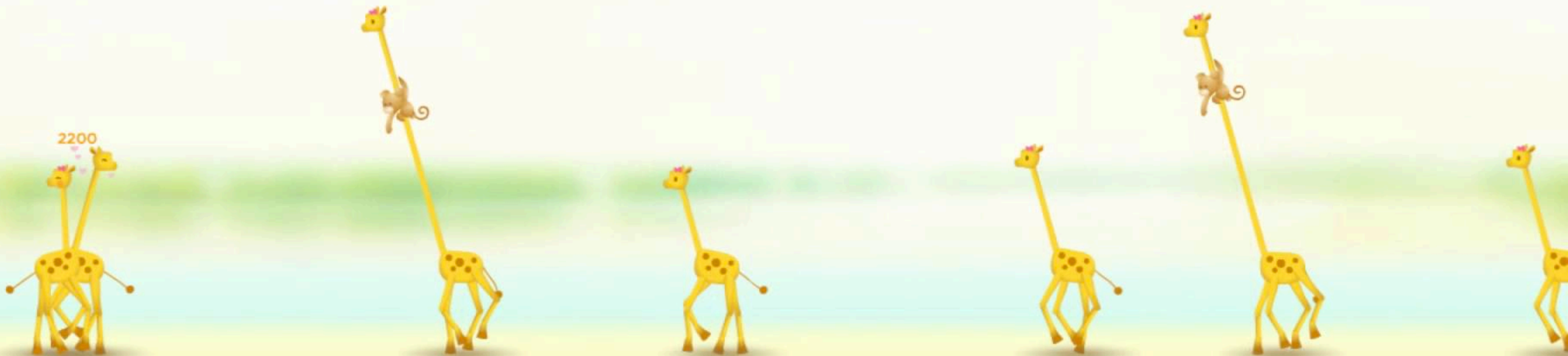
Winterbells, Casanova, Sunny Day Sky

FERRY HALIM PRESENTS
AN ORISINAL PRODUCTION

CASANOVA

198400

2200



2010

Mobile and Flash

Flash's struggle with mobile

- As Apple and Google open their smartphones to 3rd-party developer creation, they were incredibly wary of how content would function and work on their platform.
- Apple especially cared a lot about this, and was wary about Flash on their devices



Steve Jobs, CEO of Apple, writes 1,703 highly regarded words on Flash

Thoughts on Flash

Apple has a long relationship with Adobe. In fact, we met Adobe's founders when they were in their proverbial garage. Apple was their first big customer, adopting their Postscript language for our new Laserwriter printer. Apple invested in Adobe and owned around 20% of the company for many years. The two companies worked closely together to pioneer desktop publishing and there were many good times. Since that golden era, the companies have grown apart. Apple went through its near death experience, and Adobe was drawn to the corporate market with their Acrobat products. Today the two companies still work together to serve their joint creative customers – Mac users buy around half of Adobe's Creative Suite products – but beyond that there are few joint interests.

I wanted to jot down some of our thoughts on Adobe's Flash products so that customers and critics may better understand why we do not allow Flash on iPhones, iPods and iPads. Adobe has characterized our decision as being primarily business driven – they say we want to protect our App Store – but in reality it is based on technology issues. Adobe claims that we are a closed system, and that Flash is open, but in fact the opposite is true. Let me explain.

First, there's "Open".

“Flash is a cross platform development tool. It is not Adobe’s goal to help developers write the best iPhone, iPod and iPad apps.”

The War on Flash Begins

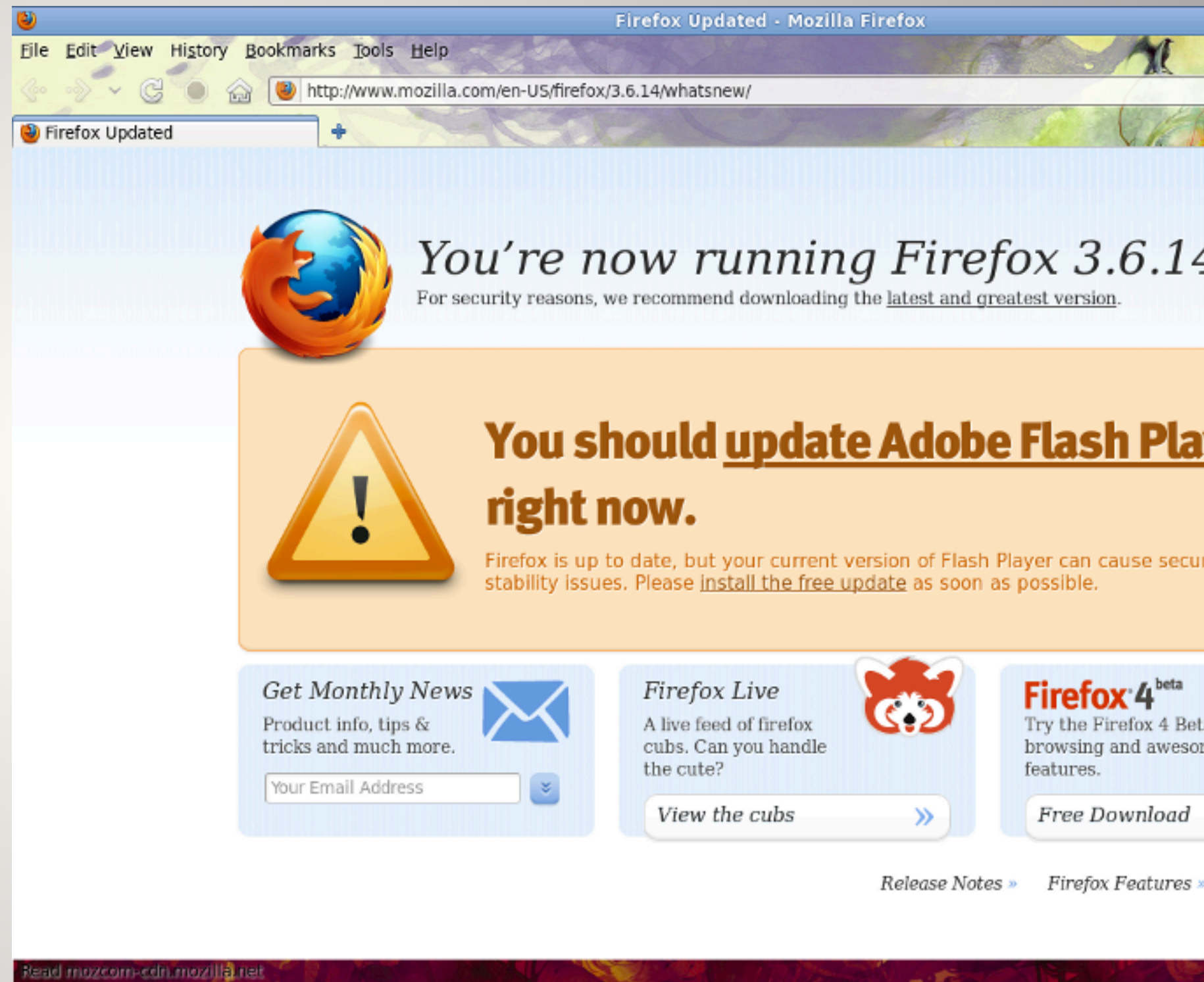
During a time when the Apple iPhone is drawing the attention of everyone and everything, how could Steve Jobs be wrong about Flash?



THIS IS THE ENEMY

With the spotlight on Flash, the shortcomings really became a focus:

- **Heavy CPU usage:** Makes your computer hot, drains your laptop battery
- **Constant security flaws and patches:** If you have something adopted by 99% of machines, hackers will certainly make it a target



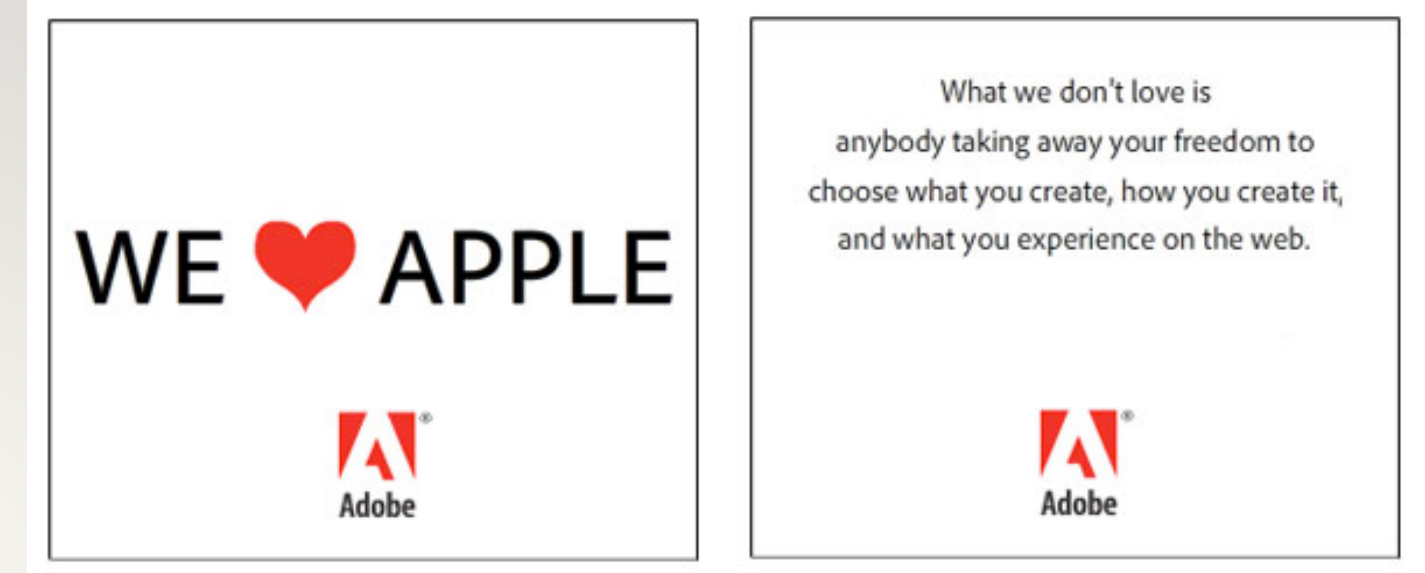
Flash still tries to go mobile

- Flash lands on several Android phones, Palm Pre, and other devices, but doesn't last long
- Google blocks Kongregate's attempt to create a mobile Flash game portal, citing that it violated the app terms of service for creating an app store environment
- Apple blocks the export of 3rd party tools for App creation, including using Flash/AIR to make native apps

Google Removes Flash App From Android Market			
	DESIGN	GEAR	SCIENCE
<p>Google removed the Kongregate Arcade app on Wednesday afternoon, citing a violation of the Android Market Developer Distribution Agreement.</p> <p>Although Google didn't elaborate, it's likely that Kongregate violates section 4.5 of the Developer Distribution Agreement. That's a non-compete clause which states developers "may not use the Market to distribute or make available any Product whose primary purpose is to facilitate the distribution of Products outside of the Market."</p> <p>The Kongregate app hosts Flash games created by thousands of outside developers. In other words, the app is in effect routing around the Android Market's approval process, setting up its own distribution system for Flash-based software.</p>			

Adobe runs ads across the web indicating that they love Apple, just not the policies they enforce around content creation

Media outlets begin to call Flash “dead,” calling out HTML5 as a suitable replacement



Flash is dead. Long live HTML5.

It's official, Adobe is putting its future mobile video efforts behind HTML5. So, do you really think that desktop Flash will survive for long?



By [Steven J. Vaughan-Nichols](#) for [Networking](#) | November 9, 2011 -- 07:29 GMT (23:29 PST) | Topic: [Developer](#)

182

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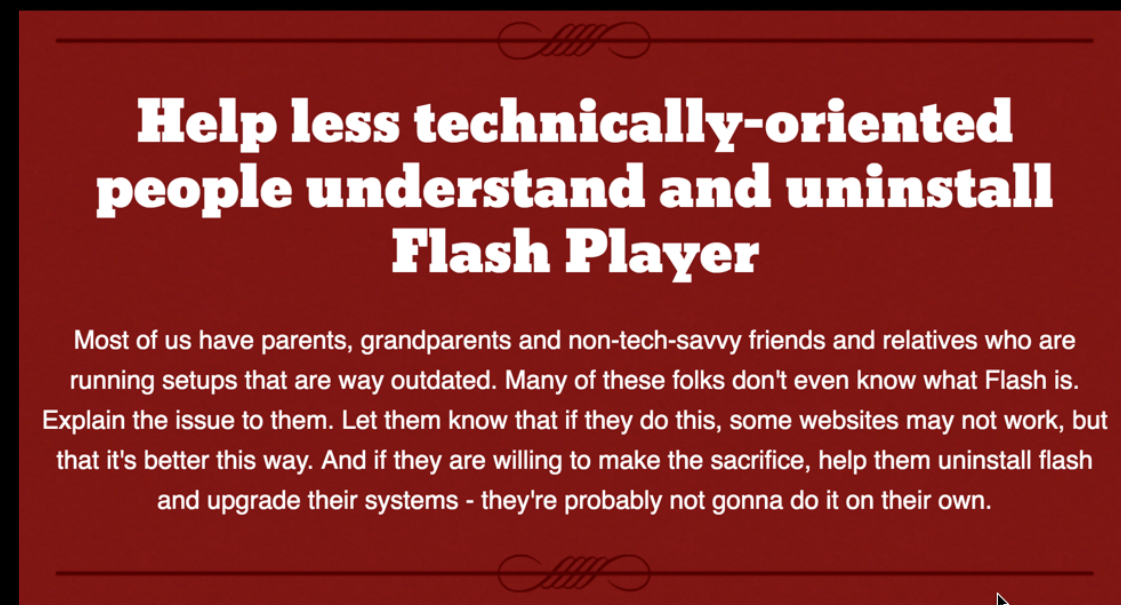
in

[Adobe's](#) love affair with its Flash format has come to an end. Oh sure, [Adobe said they were just killing development on mobile browser Flash in favor of HTML5](#), but seriously, do you think, that they'll keep working on Flash on the desktop for much



The first “Death of Flash”

- Nearly every week a news article or blog ran blasting Flash and calling it “dead”
- Websites such as Occupy Flash tried to rally users to uninstall Flash
- My relatives called me asking why I made Flash games if they were so bad





The Adobe Flash plugin has crashed.
[Send crash report](#)

This was a huge, heavily covered rally against (of all things) a browser plug-in

The industry scrambles to hide “Flash”

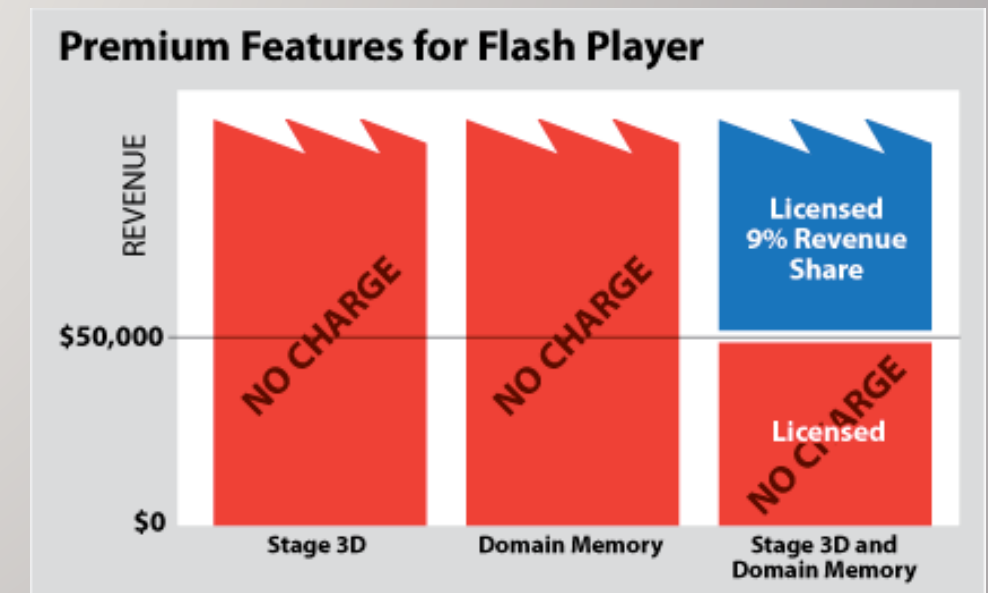
Brands and developers started to remove Flash from their branding, to reflect the shift away from Flash content

- Flash Game License rebrands to FGL
- Flash Gaming Summit became FGS
- Devs remove Flash from their studio names
- Eventually, even Adobe Flash Professional became Adobe Animate CC (2015)



Adobe ramps up tech but also makes developers fussy

- Adobe works with Unity to allow Unity projects to export directly to Flash
- Adobe starts to announce their next generation Virtual Machine (Actionscript 4), to usher in a new generation of Flash programming! Gamepad support coming!
- But... they also tried to start charging a 9% rev share for games over \$50,000 using certain technologies
- Later, Adobe drops Actionscript 4 plans, and Unity pulls out of Adobe Flash support



Flash developers were feeling confused about Flash and how to continue onward.

Is Flash really dead?

Stick with Flash, tools they know and love?

Learn native code for mobile?

Move on to Unity?

But how about...

HTML



The internet rallied hard for HTML5 to be the replacement on Flash. Even Steve Jobs called out HTML5 in his “Thoughts on Flash.”

HTML5 would usher in a world of non-proprietary game development, video streaming, and multimedia support. The future!



...but it wasn't perfect.

- HTML5 was still just a draft in 2010. And it wouldn't become standard release until 2014.
- There wasn't a complete tool-parody with Flash, or was there animation/interaction tools baked in; it required learning CSS3 or javascript
- Browser support wasn't uniform yet



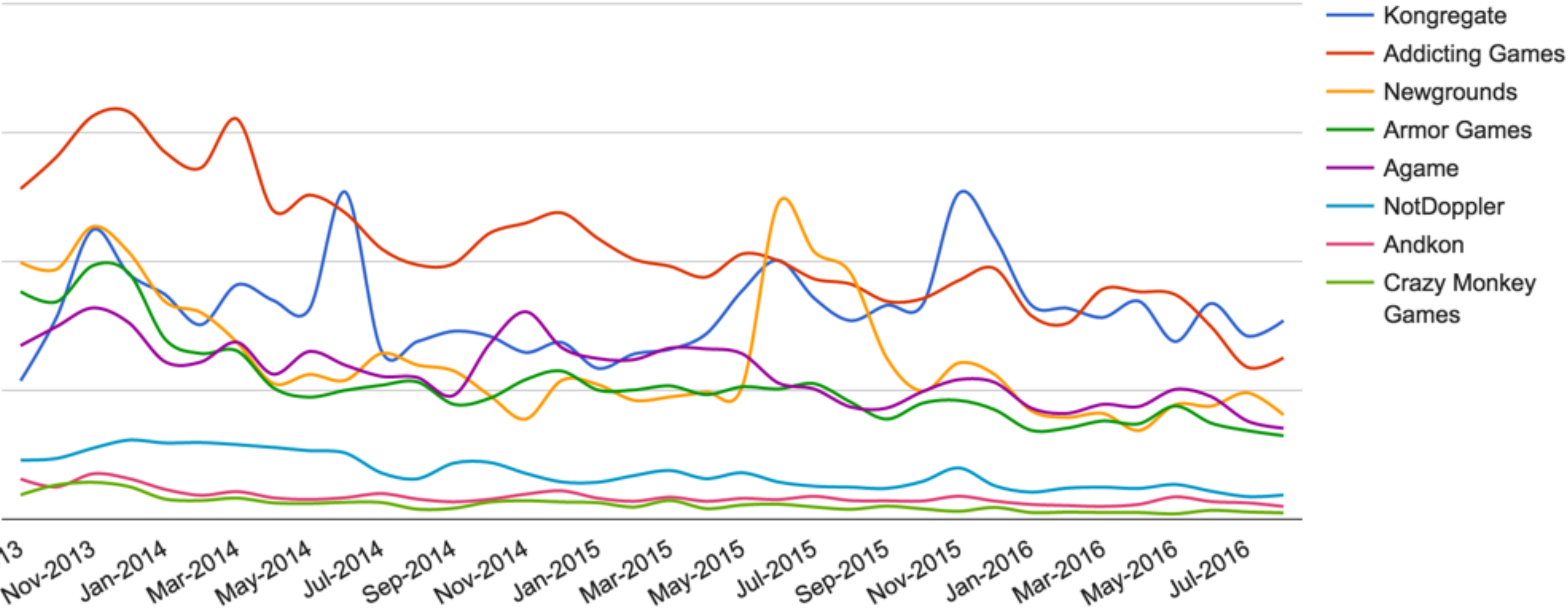
2013

The Sponsorship Collapse

Decline of sponsorships

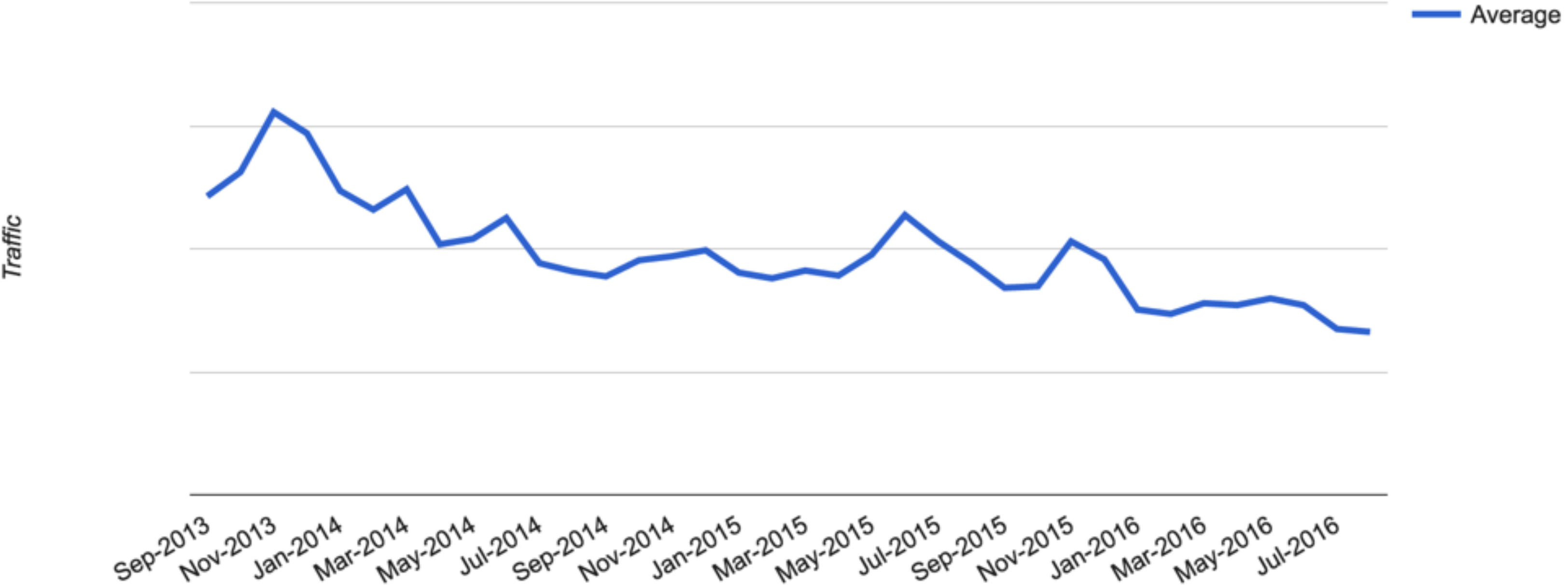
- Web ads start to see a decline in value (several factors including mobile, ad-block, etc), so games need to use other monetization methods to supplement (in-app purchases, etc)
- Since sponsored games relied mostly on web ads, sponsorships decreased in value
- Less games coming out due to lack of sponsorships, meaning less traffic for portals

Select Game Portals



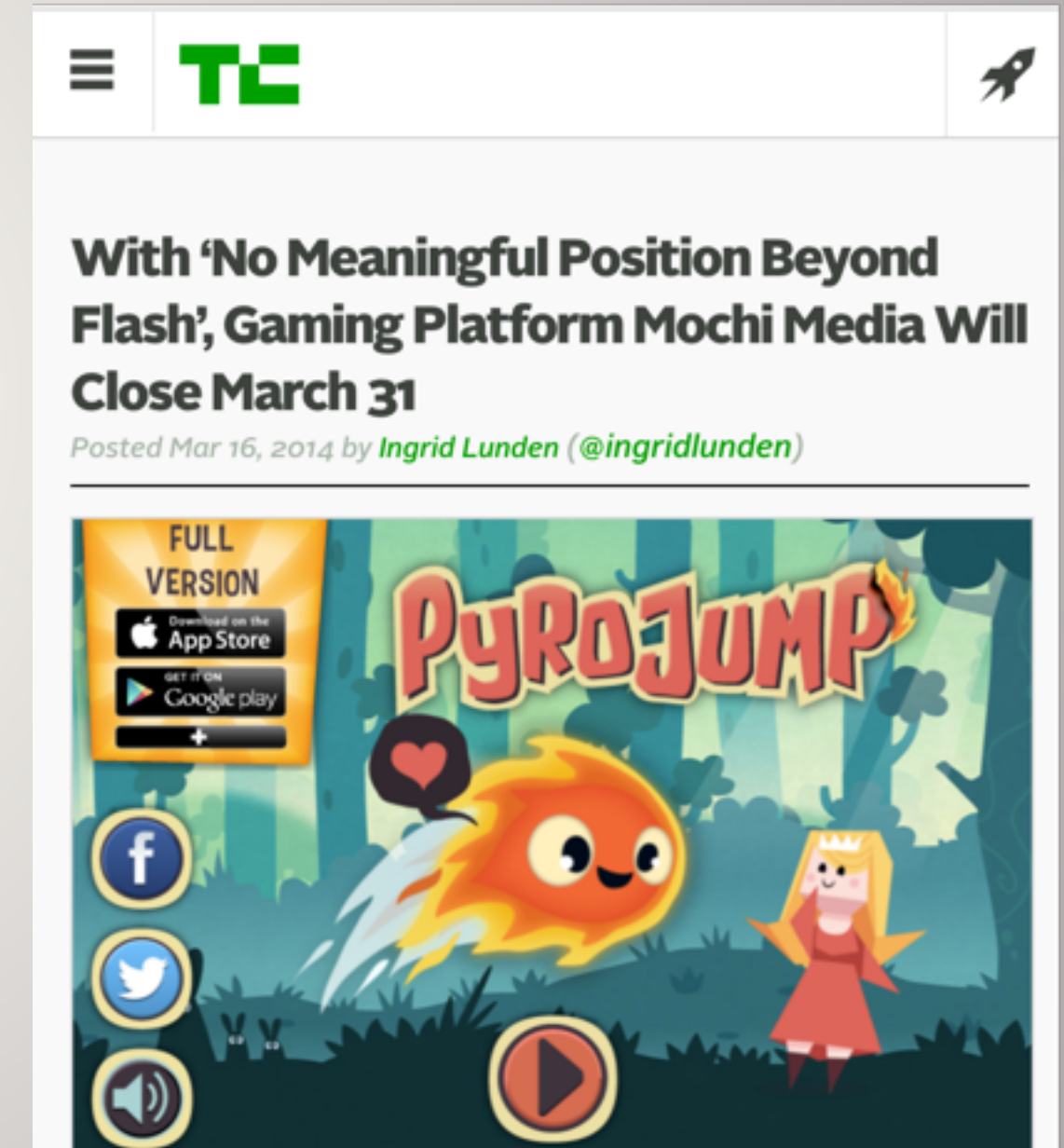
Source: Comscore.com

Average Traffic of Sample Portals



The Sponsorship market slows to halt

- Large portals slow down or stop sponsorship
- Smaller portals start to fold, unable to support themselves without the bigger portals sponsoring and creating content
- 2014: Mochi Media shuts down. The company, after being a stalwart supporter of developers and self-service tools for indies, can't sustain its business with Flash
- 2016: FGL closes its Flash Game sponsorship marketplace, but still provides services and other great tools



Many Developers Leave Flash

- **Developers spread in all directions.** Some stay in web games, others move to working on mobile or PC games.
- **Many developers leave the scene.** Many developers left the industry in favor of finding jobs in other fields.
- **Some remain making Flash games,** still able to carve their niche and find revenue in in-app purchases, ads, and smaller sponsorships

After Flash

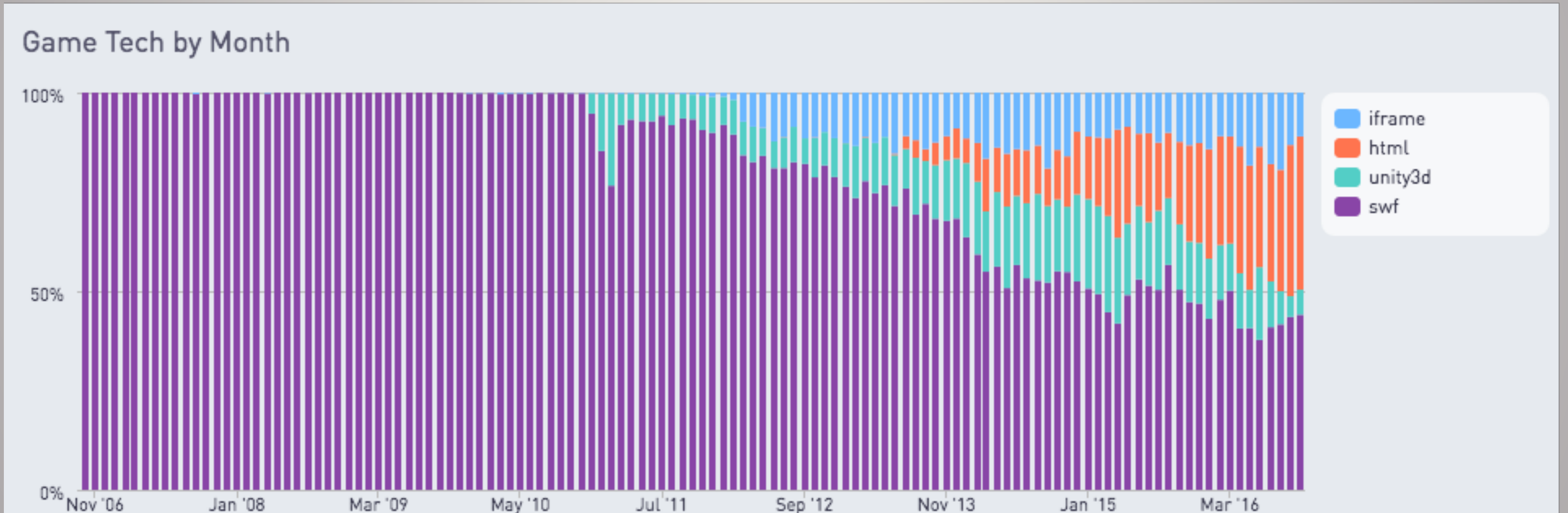
As Flash falls out of favor, new technologies, toolsets, and exports supported by HTML5 and WebGL become more powerful and prominent

Direct HTML5 + WebGL exports via Unreal, Unity, and other developer tools



mozilla

Shift in technology usage

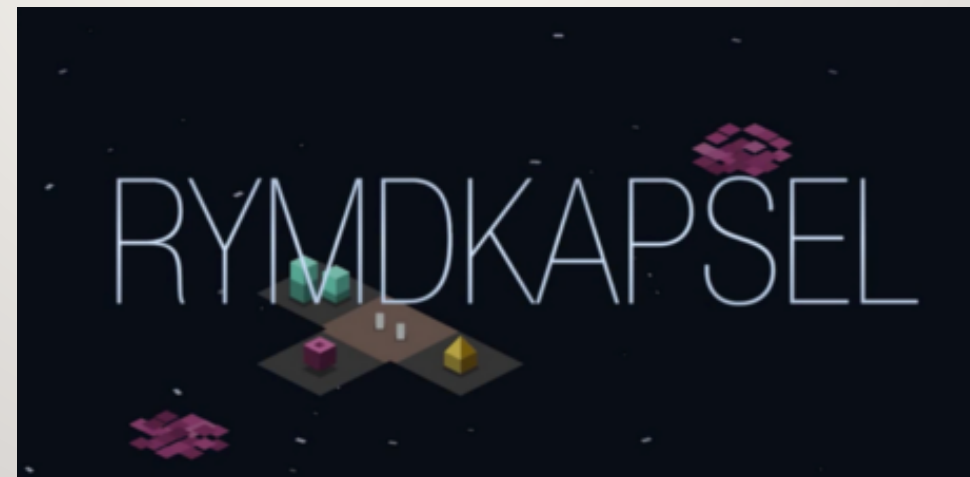


Game technology usage by month (kongregate.com)
(Unity3D = Unity Web plugin)

New Tools Emerge

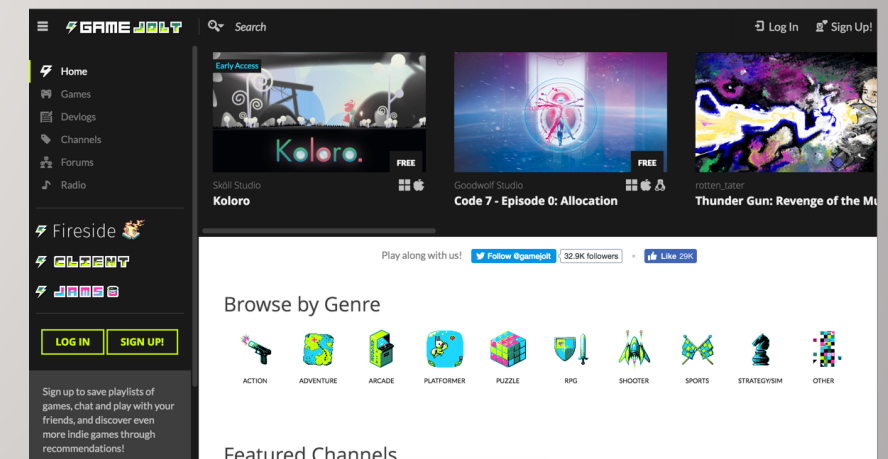
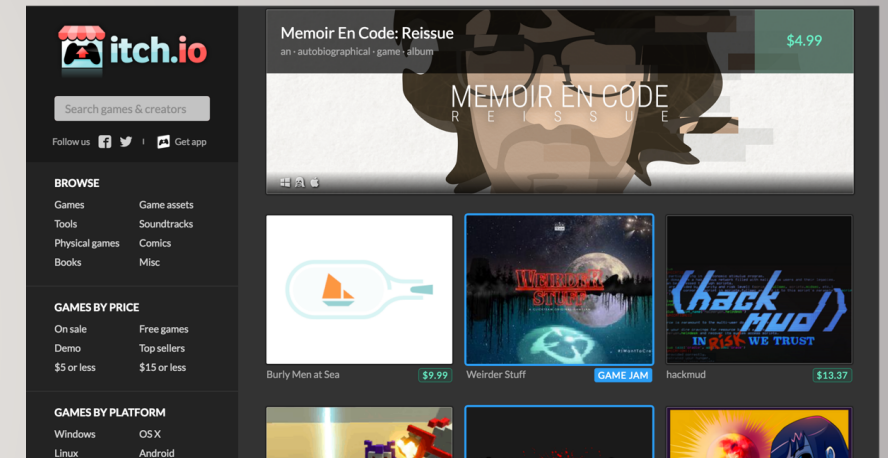
HaxeFlixel and OpenFL

Tools mirroring the Flash API allows for easy jump for developers to continue to make games for other platforms, including a bunch of hits for mobile, Steam, and web



Portals expand and change

- New portals arrive (itch.io, Gamejolt), bringing in support for downloadable formats
- Some portals move into publishing (Kongregate, Miniclip, Armor Games, etc), helping developers create web/mobile/downloadable games



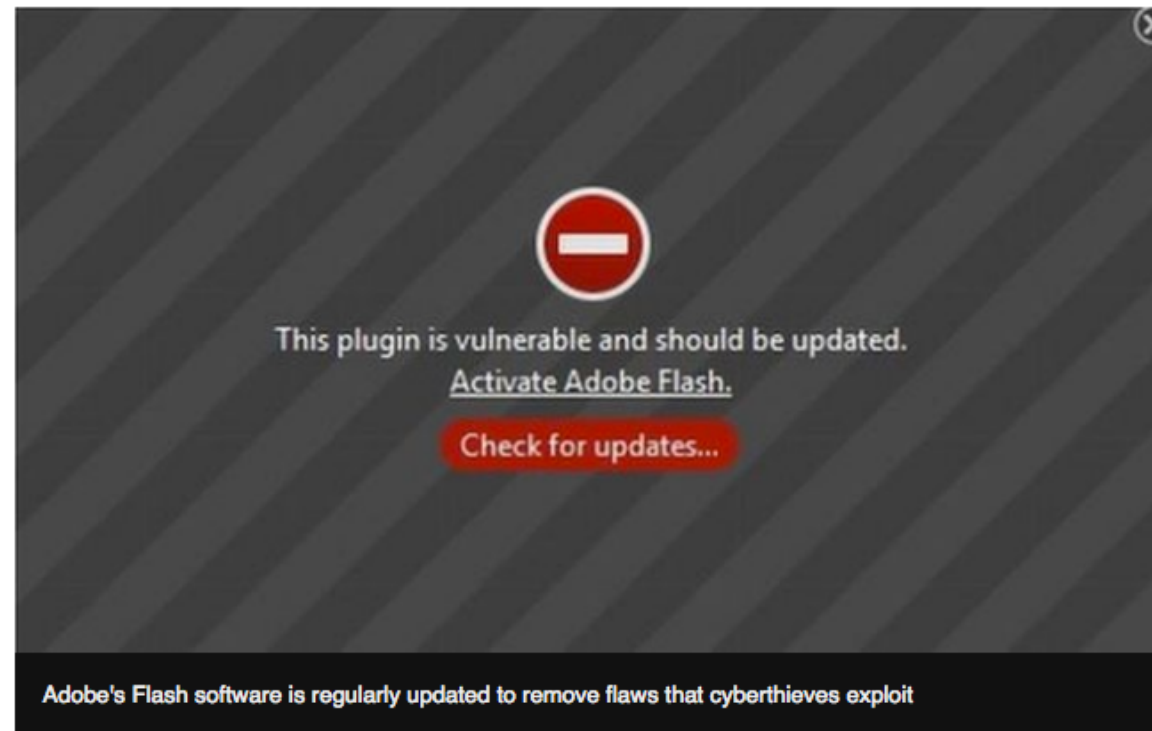
...and Flash continues slowly getting phased out of browsers

Technology

Google to phase out full support for Flash on Chrome

16 May 2016 | Technology

Share



Microsoft Edge will now automatically pause Flash ads

by NAPIER LOPEZ — 6 months ago in APPS



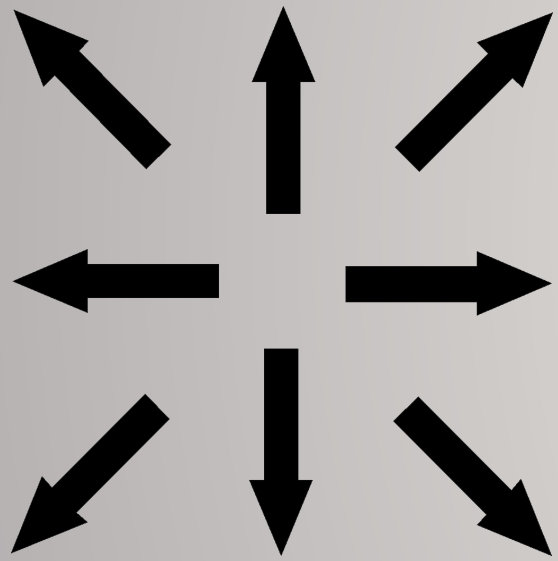
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3,607
SHARES

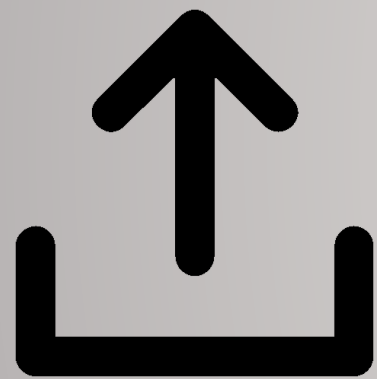


2017

The Flash Games Postmortem: what have we learned?



We learned ubiquity is incredible. Flash gave games and developers a place to focus on making great experiences instead of figuring out spending time porting to every platform. **We haven't returned to the ubiquity of Flash.**



We learned that a sharing culture for games is important. The web provided a path for developers to share their games and have players give feedback and engage. It helps new developers get discovered and veteran developers to hone their craft



We learned a lot about what it means to be indie. The modern indie scene evolved out of Flash content. We found out we can make enough money to eat while making video games. We became business owners with our quirky little games, doing what we wanted. We were innovative and were embraced for it.



We set a precedence on how we think game developers and their games should be treated. Our relationship with publishers and sponsors used to be awful. Both publishers and developers pushed to make it better, and created a collaborative atmosphere for making great games.



We continue to not talk about Flash's impact on games enough.
We don't talk about the chance we might demolish an entire innovative games space, or how millions of web games could disappear altogether with the end of browser support.

Ubiquity dies with Flash if there's no true replacement.



Flash has pushed indie games forward in a big way. Its part of our history and deserves a bit more respect than we've given it. Flash Games has lived in the shadow of the late 2000's Indie movement, but it can't be forgotten for the important foundation it laid

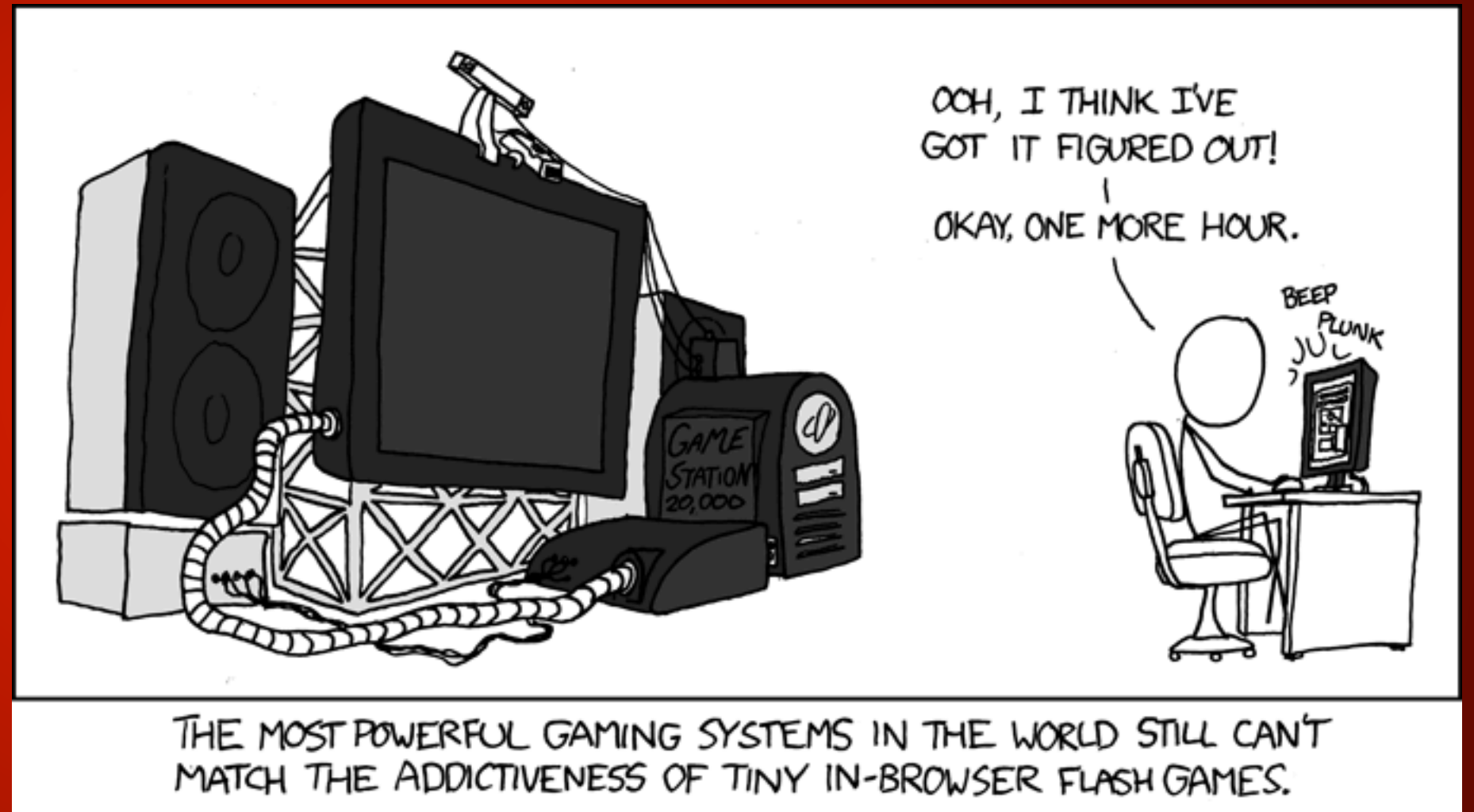
Ultimately, we need to work on making sure that future generations of developers get what we had with Flash...

Community, accessibility, rapid-innovation, and ubiquity

These are incredibly important things for our industry to chase and support, because in the end it makes us all better developers

Thank you.

John Cooney - Kongregate
@jmtb02
john@kongregate.com



xkcd.com/484