



THE FUTURE OF FLASH



Interactive design used to be simple.



Demand drives innovation



Advanced 2D and 3D on GPU



Interactive animations

ADVICE FOR EDUCATORS

- Try not to have students focus or obsess on a single technology.
- For example, having a good design sense is much more important than knowing every little feature in Photoshop.
- Designers who know how to code are in huge demand.
- HTML5 and JavaScript should be the primary technology used.
- Flash is absolutely essential for game developers and animators.
- Have a class teaching students how to teach themselves!

THE CURRENT STATE OF



SOME GOOD NEWS



Google Chrome is now the top browser in the world

ANIMATED WEBSITES



ADOBE AND HTML

html.adobe.com



CSS Regions

CSS Blend Modes

CSS Exclusions

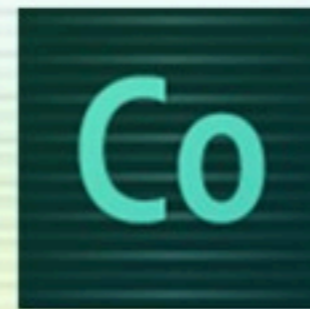
CSS Shaders



Edge Animate



Edge Reflow



Edge Code



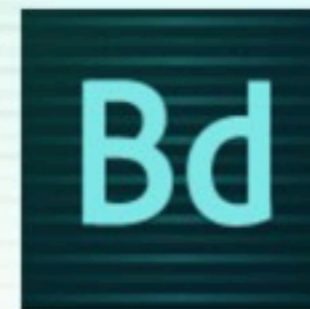
Edge Inspect



Edge Web Fonts



Typekit

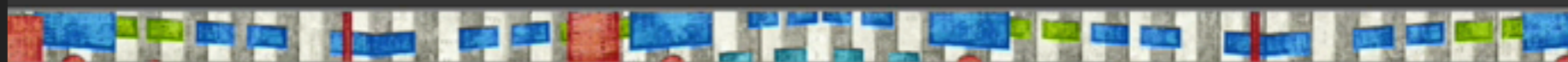


PhoneGap Build

ADOBE PHONEGAP



HTML5 for Flash Developers



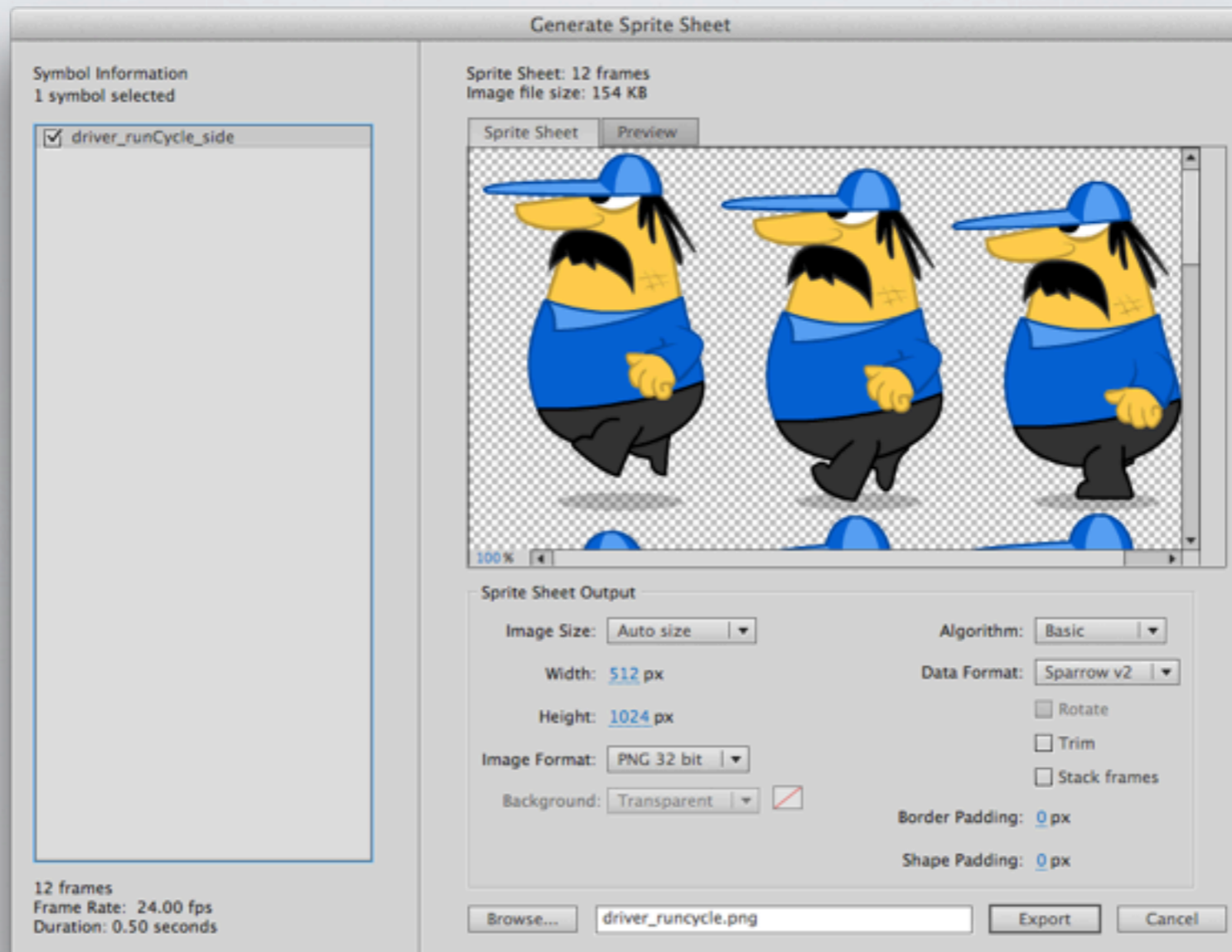
with
Lee Brimelow

lynda.com



Flash Professional Future

SPRITE SHEET EXPORTER



CREATEJS EXPORTER



FLASH PRO FUTURE

Application refresh

- Rebuilt from ground-up
- Even better extensibility via JSFL
- 64-bit native and HiDPI (retina) ready



New use-cases we currently explore

- Asset pipeline for animations, UI, interactive design and gaming
 - optimized export of bitmap spritesheets and vector graphics for GPU
- Export assets for use with various platforms and languages
 - C++, Obj-C, C#, ActionScript, JavaScript

ANIMATION TOOLS



Anywhere

Flash Pro

- Assets creation and design
 - Gaming, Video, Cartoons, Interactive content anywhere
- Vector animations
- Bitmap animations
- Spritesheets
- Export to various platforms



Web + HTML apps

Edge Animate

- Motion design on the web
- Animate and interact with HTML elements
 - DIV, IMG, SPAN...
- Available on any device via browser
- Perfect for Digital Publishing Suite



New GPU powered Flash

TWO AREAS



Advanced video



Gaming

WHAT IS ADVANCED VIDEO



- Content protection (DRM)
- Live streams
- On-demand video (DVR)
- Analytics and ad integration
- Animated overlays
- and much more

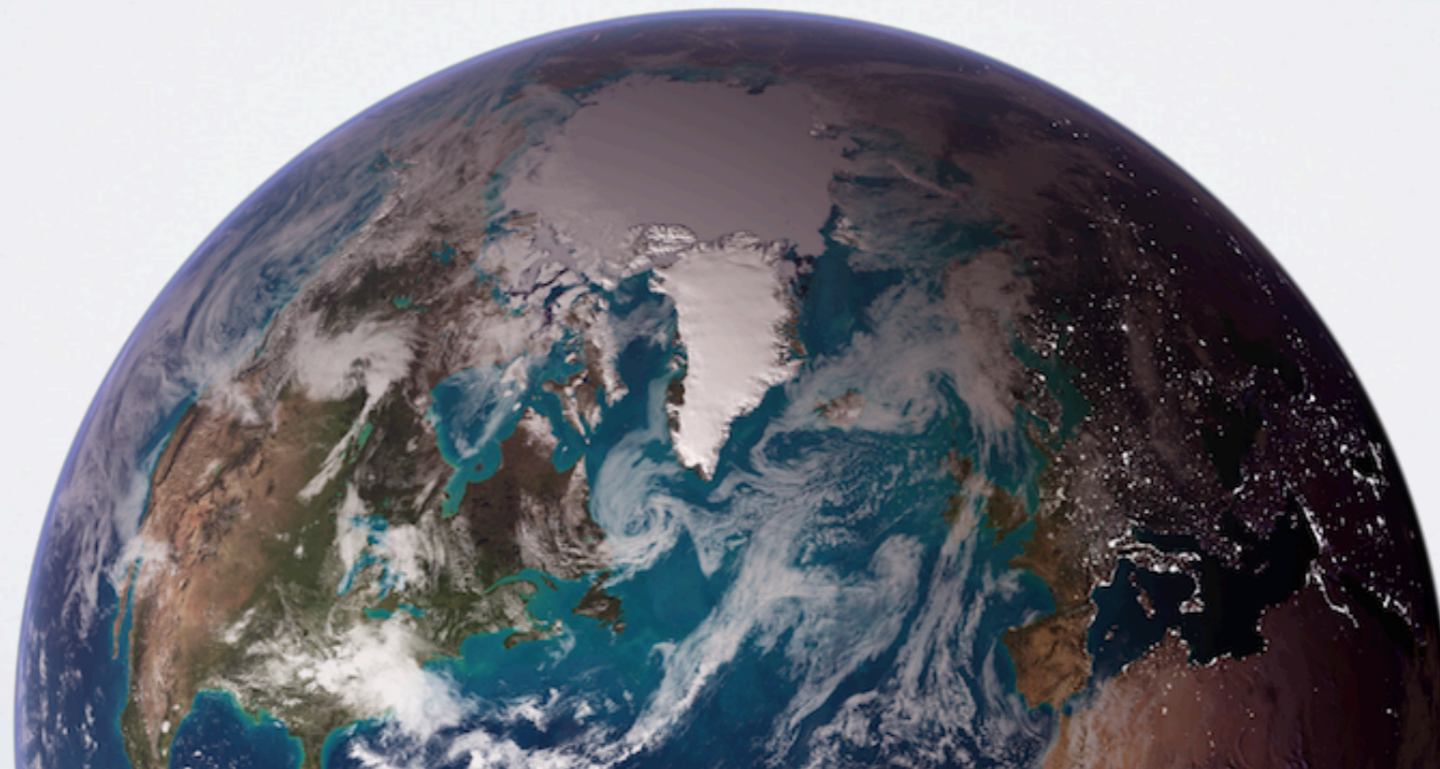
WHY USE FLASH FOR GAMES?

CONSISTENCY AND REACH





Over **1.3 Billion** people
Can play your game. No install. No friction. Now.



Flash Player brings an audience
20x greater than Xbox 360.

Plus 500M iOS + Android devices with AIR.



SILENT AUTO-UPDATES



In 48 hours, we can update
600 million people to the latest
Flash Player.

600 million + Google Chrome + Win 8 IE10 ModernUI

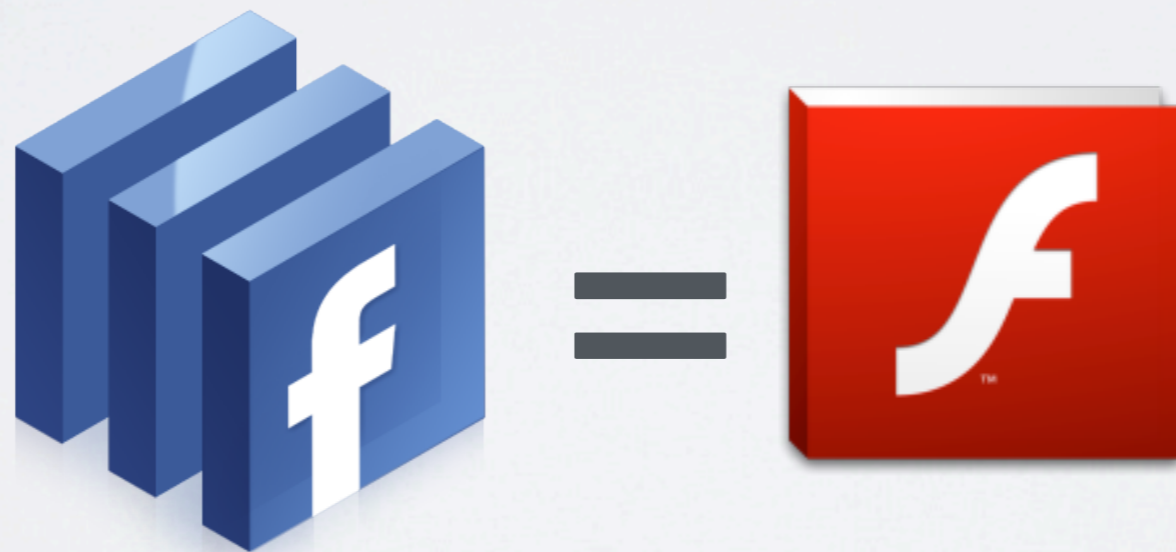


With no install.
On 1.3B+ machines.

And 500M devices.

FLASH RULES FACEBOOK

96% of the top Facebook games are delivered with Flash.





DEMOS

APPLE AND FLASH

The screenshot shows the Mac App Store interface. At the top, there are navigation icons for Featured, Top Charts, Categories, Purchases, and Updates. A search bar is located in the top right corner. The main banner features the game 'Botanicula' with a green background and a white tree-like character. To the right of the banner is a vertical stack of promotional banners for 'MULTIPLAYER GAMES', 'Cheetah3D', and 'QUAKE 4'.

Below the banner is a 'New and Noteworthy' section with a 'See All >' link. It contains a grid of game listings:

| Game Title | Category | Ratings | Price |
|-------------------|-------------------|------------|---------|
| Botanicula | Games | 21 Ratings | \$9.99 |
| Quake 4™ | Games | 11 Ratings | \$19.99 |
| Cheetah3D | Graphics & Design | 8 Ratings | \$99.99 |
| Radiant Defense | Games | 17 Ratings | FREE |
| Violet Storm | Games | 5 Ratings | \$1.99 |
| Legendary Heroes | Games | | \$4.99 |
| MacGuffin's Curse | Games | | \$1.99 |
| iMage Tools | Photography | 7 Ratings | FREE |
| Pawn'd | Games | 12 Ratings | FREE |
| Blot | Games | 27 Ratings | \$0.99 |
| Totemo | Games | | \$1.99 |
| Elder Sign: Omens | Games | 46 Ratings | \$0.99 |

On the right side, there is a 'Top Paid' sidebar with a 'See All >' link. It features an illustration of two robot characters and a list of the top 6 paid games:

1. **Machinarium**
Amanita Design
2. **Angry Birds**
Rovio Mobile Ltd.
3. **Asphalt 6: Adrenaline**
Gameloft
4. **StuntMANIA Reloaded**
Sector3 Games
5. **Galcon Fusion**
galcon.com
6. **Assassin's Creed II**
Ubisoft



STAGE 3D

(best feature, worst name)

1000x faster 2D & 3D rendering.

Cinematic, fluid 60 fps graphics.

Across desktop browsers, iOS, Android.

Full GPU acceleration on ~85% of all connected PCs.

DEVELOPING GAMES ON STAGE3D

STARLING



AWAY3D



Supported frameworks by Adobe

OTHER USEFUL FRAMEWORKS

FEATHERS UI



feathersui.com

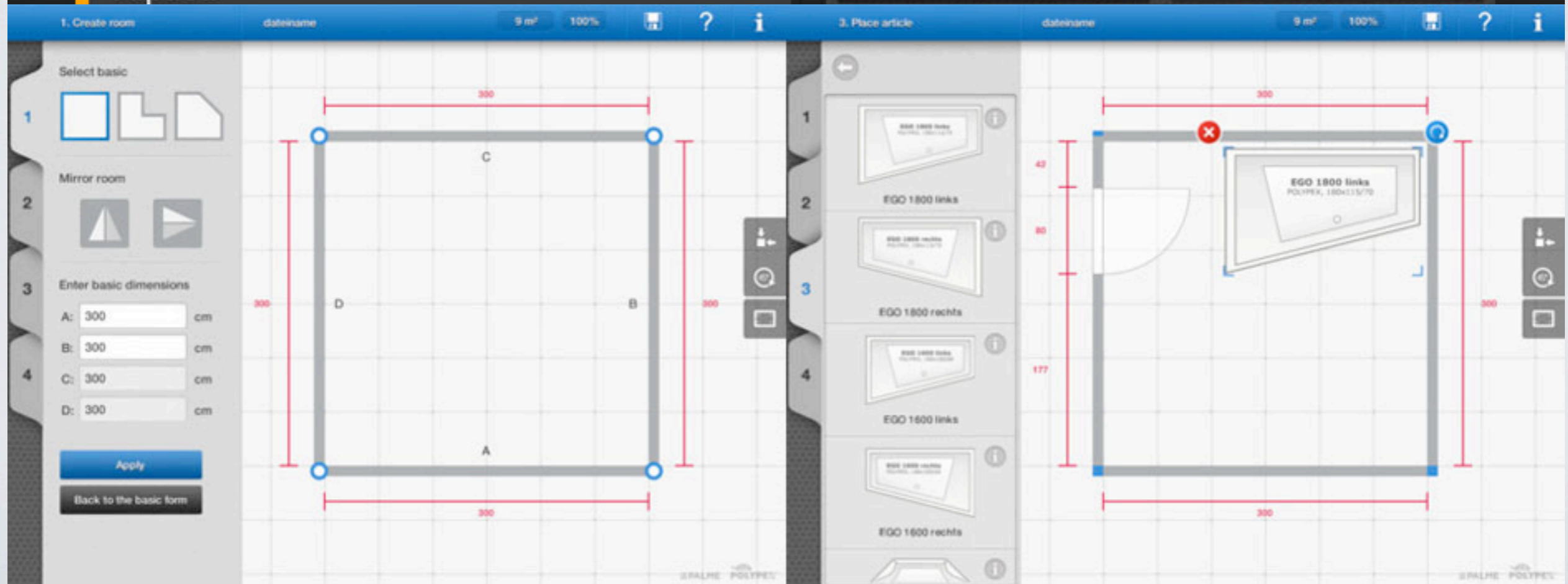
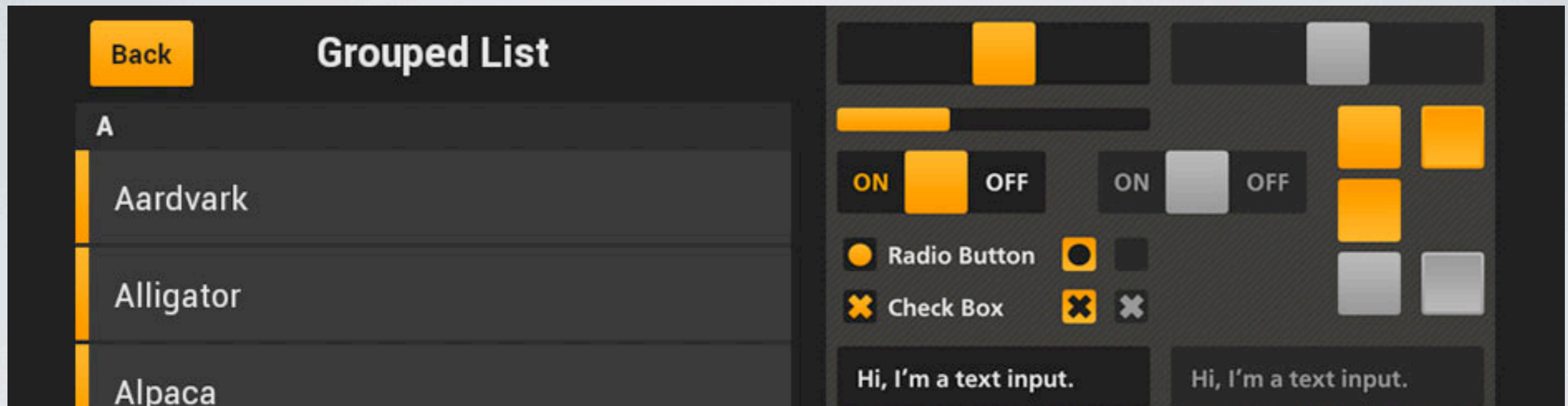
CITRUS



citrusengine.com

FEATHERS UI

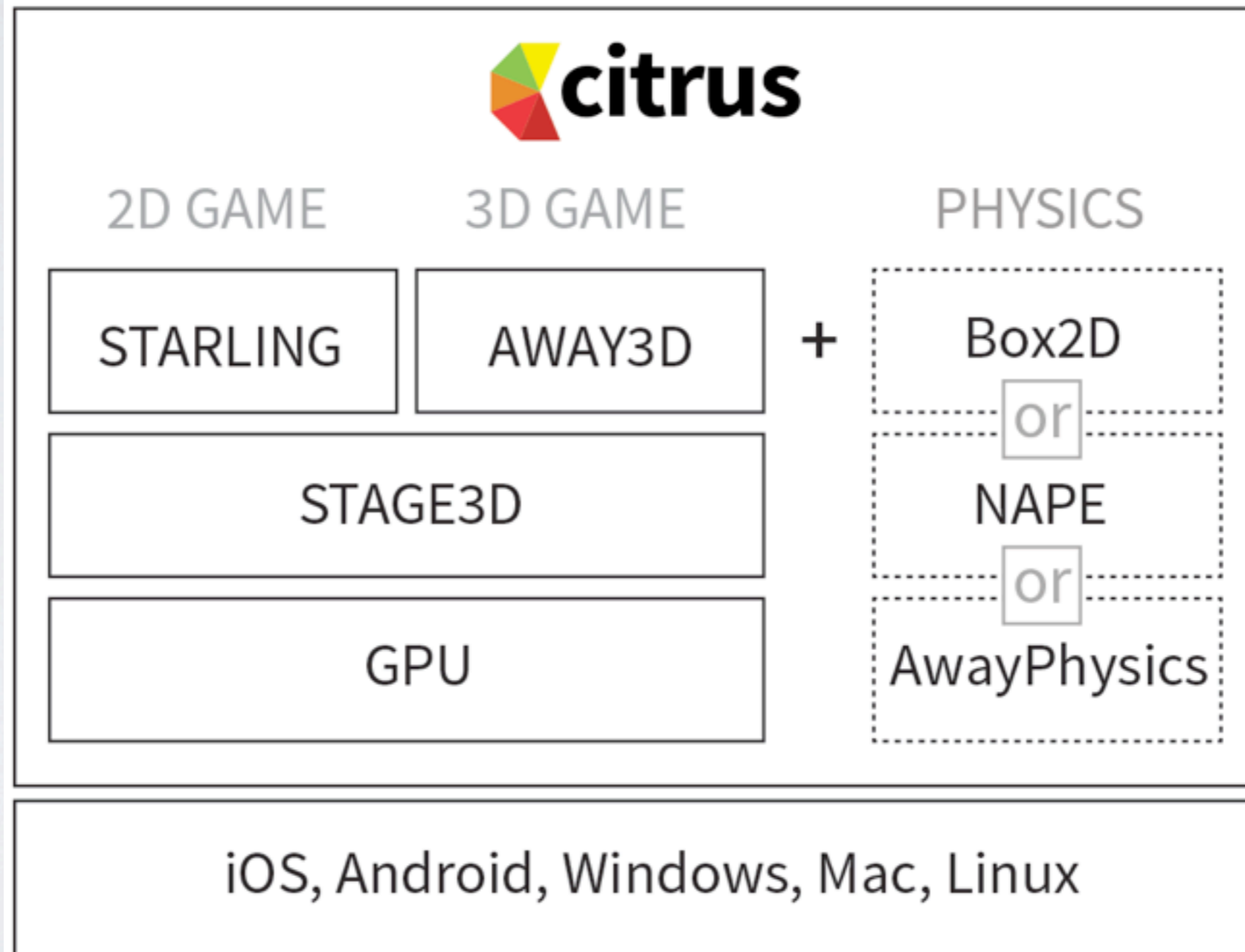
feathersui.com



CITRUS GAME ENGINE

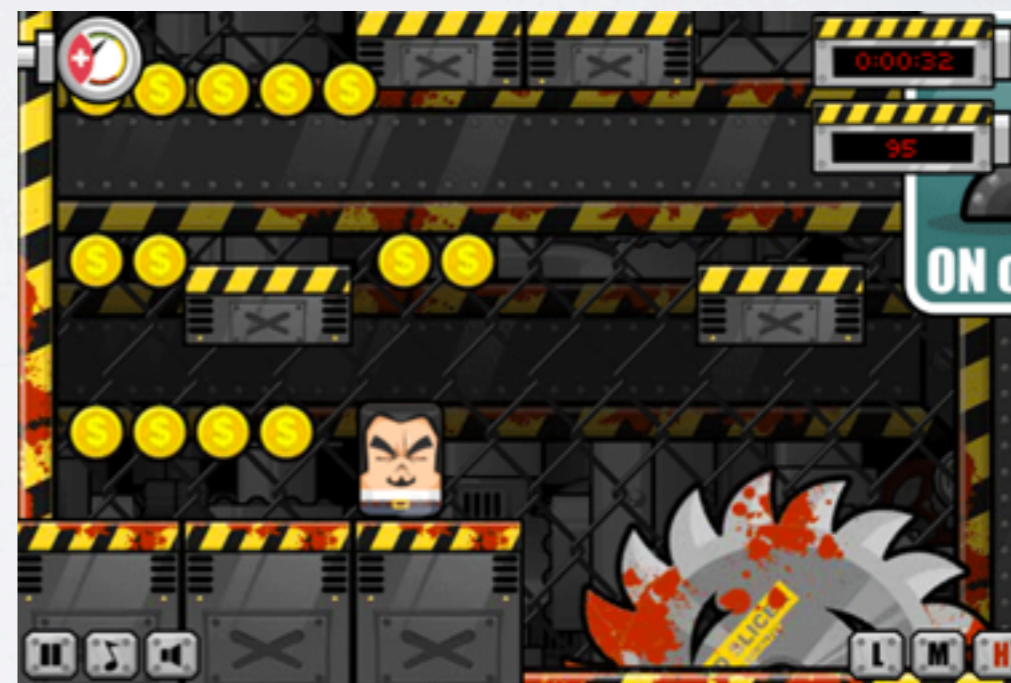
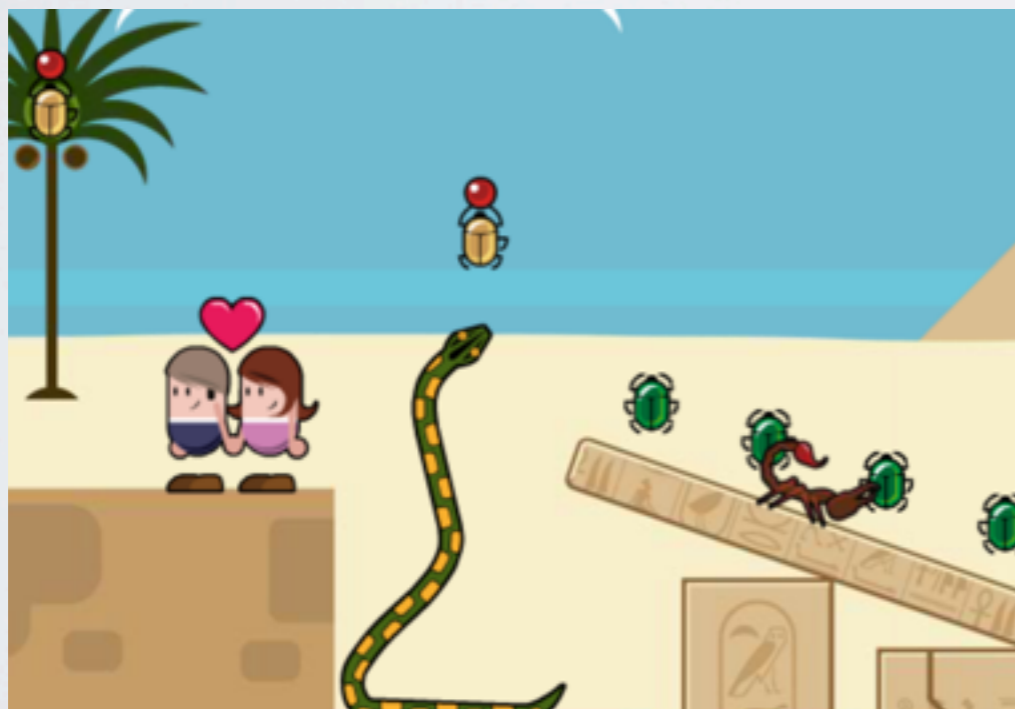
citrusengine.com

The engine stack



CITRUS GAME ENGINE

citrusengine.com



"Perfect for teaching game development!"

DEMOS

The Flash logo, a white stylized 'f' on a red square background.

FLASH RUNTIME ROADMAP

FLASH PLAYER NEXT

Performance performance performance

- Creating a new virtual machine built from ground-up
- Significantly updating the ActionScript language
- Changes will make ActionScript up to 4x faster
- More advanced gaming features to enable console-quality

MONOCLE

Activity Summary

0:07

Frame Stats | Stage3D Simulator | Session Info

Frame 255 | Sample Time: Actionscript: 3 ms | Total: 3 ms | Data Quality: 🚫

| Function | Self Time (ms) | Total Time (ms) |
|--|----------------|-----------------|
| ▶ p_dyn.b_phf (ambiera.renderer) | 1 | 33% |
| ▶ Context3D.setProgramConstantsFromMatrix (flash.display3D...) | 1 | 33% |
| ▶ Context3D.setCulling (flash.display3D) | 1 | 33% |
| b_hgg.onEnterFrame (ambiera) | 0 | 0% |
| ▶ i_vtr.u_ppy (ambiera) | 0 | 0% |
| ▶ v_wrn.d_ksu (ambiera) | 0 | 0% |
| ▶ p_dyn.m_shq (ambiera.renderer) | 0 | 0% |
| ▶ t_ani.d_ksu (ambiera) | 0 | 0% |
| ▶ p_dyn.g_hzc (ambiera.renderer) | 0 | 0% |
| ▶ p_dyn.t_rfa (ambiera.renderer) | 0 | 0% |

Stage3D Commands

- Context3D.clear, id:0, red:0.254902, green:0.2549...
- Context3D.setTextureAt, id:0, sampler:1, textureId...
- Context3D.setTextureAt, id:0, sampler:2, textureId...
- Context3D.setProgram, id:0, programId:26756530...
- Context3D.setBlendFactors, id:0, sourceFactor:1, d...
- Context3D.setDepthTest, id:0, depthMask:0, pass...
- Context3D.setCulling, id:0, triangleFaceToCull:2
- Context3D.setVertexBufferAt, id:0, index:0, vertex...
- Context3D.setVertexBufferAt, id:0, index:1, vertex...
- Context3D.setVertexBufferAt, id:0, index:2, vertex...



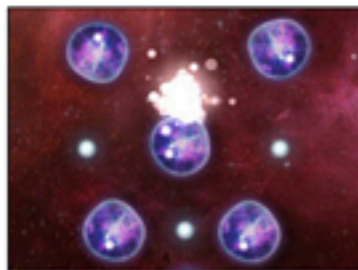
Adobe® Gaming

Better Games. More Easily. For More People.

[HOME](#)[WHY FLASH?](#)[SHOWCASE](#)[GET STARTED](#)[RESOURCES](#)

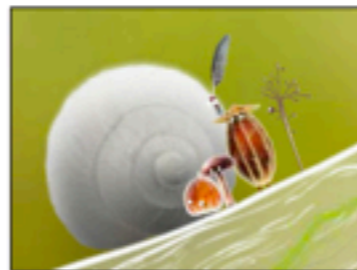
Playing is believing.

Flash technology powers the most games on the web – including the most successful games in the world on social networks like Facebook, Tencent, Gree, and DNA. It also enables best-selling and award-winning mobile apps in the iOS App Store, Android Market, and Amazon Appstore. One platform. Awesome games everywhere...



Magnetix

Magnetix is a simple and addictive puzzle/arcade game of attraction. Enemies become attracted to you as you enter their field.

[Play on iPad](#)

Botanicula

Five friends set out on a journey to save the last seed from their home tree in this award-winning game from Amanita Design.

[Watch trailer](#)[Play on Desktop](#)

Hero Mages

Command a band of mighty heroes fighting to control the fate of Papillion in this RPG that has been featured by Apple in the iOS app store.

[Play on iOS](#)[Play on Android](#)

Traffic Wonder

Guide traffic safely to their destinations using as little fuel as possible in this puzzler that is available on all the mobile app stores.

[iOS](#)[Android](#)[Blackberry](#)

gaming.adobe.com

ADOBE GAME JAMS

- Fun, creativity, programming, evangelists on-site, party
- Target: Game designers, developers, artists, musicians
- 24 hours
- Next one in Chicago on 30th November 2012
 - register: adobegamejamchi.eventbrite.com
- Looking at Seattle, Austin, Boston, Los Angeles
- Join us!
- gaming.adobe.com/events/gamejams



“BE OPEN, BE CREATIVE, HAVE FUN”



@TOMKRCHA

QUESTIONS?